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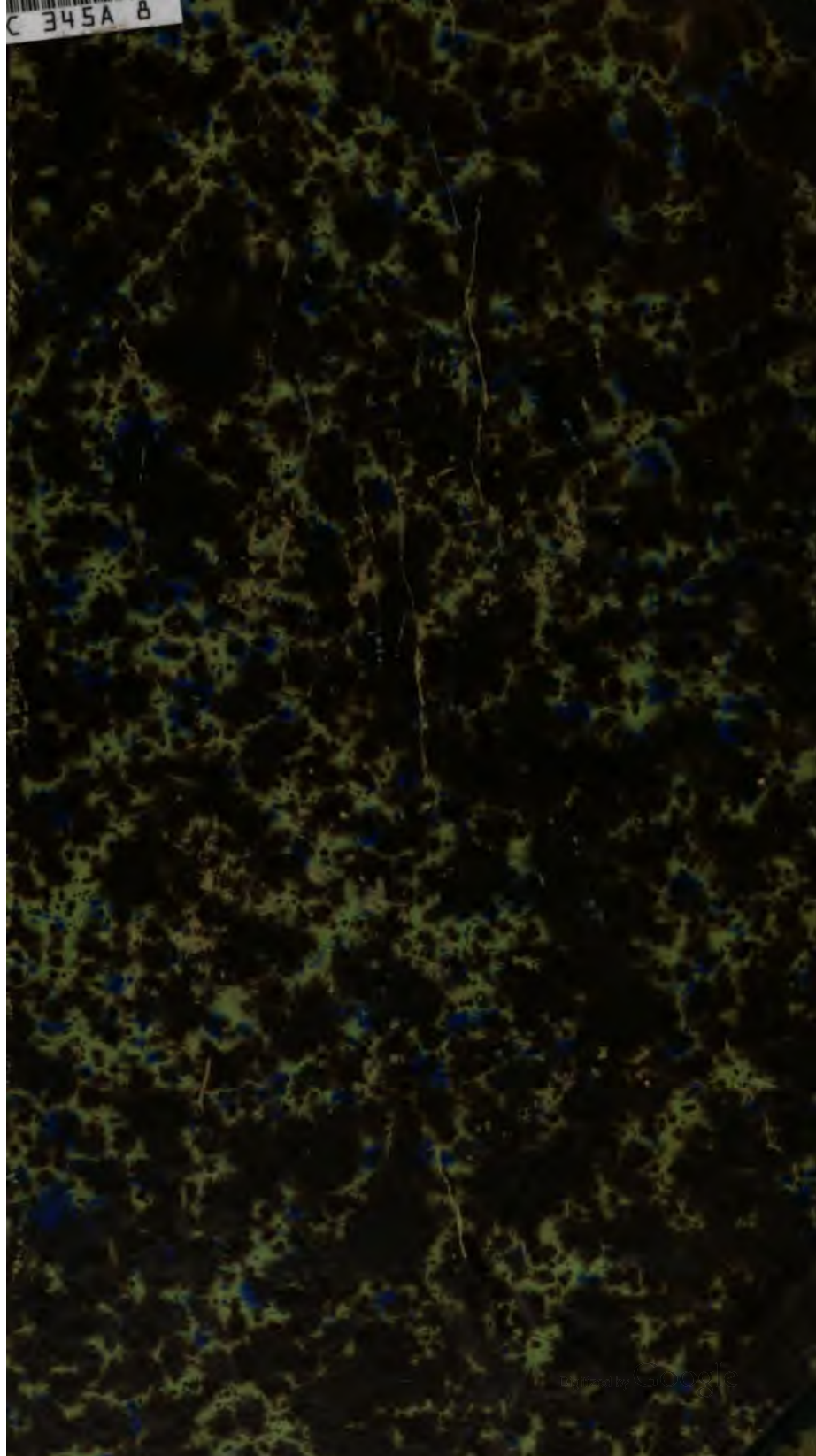
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THE
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AND
PHARMACEUTIC FORMULARY.

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THE
JOURNAL OF MATERIA MEDICA
AND
PHARMACEUTIC FORMULARY.

New]

JANUARY, 1859.

[Series.

Remarks on the Therapeutic Resources furnished by the
Indigenous Materia Medica of the United States.

BY CHARLES A. LEE, M. D.

I propose to present to your readers a comprehensive synopsis of the known indigenous medicinal plants of the United States, with such details in regard to their practical uses as your limits may allow. My aim will be to aid in the development of a home Materia Medica, having long been satisfied that we are far more dependent on foreign countries for drugs than is necessary, and that the time is not remote when the American practitioner will be able to dispense with a great proportion of medicinal substances now imported from abroad. No branch of medical science has been more zealously or successfully prosecuted within the last quarter of a century than the Materia Medica, and there is no department of our science whose investigation promises more important results, or which, at the present moment, employs so many ardent and enlightened cultivators as this. These researches penetrate and take hold of every department of nature, animal, vegetable, and mineral; but as the vegetable kingdom furnishes the greatest portion of our therapeutic resources, it is to this source our attention is chiefly to be directed. Take our own great State of New York, for example: we number about fourteen hundred and fifty known species of flowering plants, of which two hundred are herbaceous—we have two hundred and fifty species of woody plants, including eighty that attain the size of trees—we have over

one hundred and fifty species of plants that are known to possess medicinal properties, many of them of great value. Of exotics now naturalized we have one hundred and sixty species, many of which have been introduced accidentally with grasses and other agricultural products from abroad. Of such, also, are nearly all the weeds that prove so troublesome to the farmer. To the same source we are also indebted for many of our useful species, as most of our grasses, which spring up spontaneously on every hand. Of *Ferns* we have about sixty species belonging to the flora of the State, some of which are known to be medicinal. Our *Mosses*, *Liverworts*, *Lichens*, and *Seaweeds*, have, as yet, been but very imperfectly investigated, though many of them would, undoubtedly, furnish valuable contributions to medicine. When these shall have been more carefully studied and more fully known, we shall no longer send to Iceland, Ireland and the East Indies for mucilaginous mosses and other remedies of this class. Our *Fungi* are extremely numerous, constituting, probably, at least three thousand species, but few of which have been thoroughly studied. Here, then, is a wide field for botanical and therapeutical research. At present our knowledge scarcely suffices to enable us to distinguish such as are poisonous from those which are edible and nutritious, and yet the botany of this State has, as yet, been but imperfectly explored. Thousands of cryptogamic plants yet remain undiscovered, besides many of the phenogamous order. The geological features of our State are greatly diversified, its range of temperature is great, and the geographical distribution of plants is equally extensive, being governed by both these circumstances. Already we can number more species than are found in the whole of New England; but we have mountainous and alpine regions in the State of New York, elevated some six thousand feet above the ocean, which furnish an alpine vegetation almost unexplored. Many plants on our Atlantic border are found nowhere else in our State, and the same remark will apply to the valley of the Hudson and to our mountainous, western and northern regions. On the borders of our northern lakes, as has been noticed by Prof. Torrey, there are marine plants growing, showing that these waters were formerly saline. Of the *Dicotyledonous* orders in the State of New York, the *Ranunculaceæ* constitute about one thirty-eighth of the flowering plants; the *Cruciferae* one forty-fifth;

the *Leguminosæ* one twenty-sixth; the *Rosacæ* one twenty-fifth; *Umbelliferae* one thirtieth; *Coniferae* one ninth; *Ericacæ* one thirty-fourth; *Labiatae* one thirty-second; *Scrophulariaceæ* one thirty-ninth. Of the monocotyledinous plants there are but three large orders, viz.: *Orchidaceæ*, forming about one thirty-ninth of our flowering plants; *Cyperacæ* one-ninth, and *Gramineæ* one-twelfth, which proportions vary but little from the average of the whole flora of North America. The southern portion of our Union is still more fruitful in medicinal plants than the northern or middle section. This might have been expected from its different climatic conditions and geological and geographical features.

A very slight acquaintance with the subject must satisfy every intelligent mind that the resources of the vegetable kingdom, so far from being exhausted, have hardly yet been called into existence. Whatever may be the demerits of the so-called Eclectic, Botanic, and Thomsonian schools, they at least deserve the praise of having developed to a considerable extent the therapeutic properties of many of our indigenous plants, and by their experiments on the sick have enabled us to form some estimate, however imperfect, of their just value. Every department of nature, doubtless, abounds in remedies of great value, as yet undiscovered, and there is great plausibility in the opinion advanced by some, that every country spontaneously furnishes remedies for those maladies to which the people of the soil are naturally subject, and that foreign drugs would soon cease to be imported, if the properties of our own plants were more thoroughly understood. It seems a very just remark of Lindley, that the heat of a country, its humidity, particular localities, food, and the social habits of a people, will predispose them to varieties of disease for which the drugs of Europe offer no sufficient remedy, and will render that which is relied upon in one country unworthy of dependence in another. Emetic plants, for example, are more abundant in warm than in cold climates, and they are more frequently indicated in the former. Many similar examples might be given, were it necessary, furnishing weighty inducements for the inhabitants of any given country or locality for exploring diligently the therapeutic resources of their particular section. When we consider that more than one thousand plants of the United States are known to possess medicinal qualities of value, and that but very few of them have been

investigated with any considerable care, either as regards their physiological or therapeutical properties, we shall need no additional argument to urge the cultivators of medical science to enter with renewed energy upon this almost unexplored field. It may be urged that our *Materia Medica* is already too extensive, and needs abridgment rather than extension, but this superficial objection vanishes when we consider that the medicinal properties of no two plants are precisely similar, and that the great object in view is not the multiplication of comparatively inert articles, but the ascertainment of the most valuable of those which can fulfil certain indications with the greatest promptness and certainty. We are not of the modern school that deny that there is any such art as that of medicine, or who would make it to consist merely in watching the progress of disease, unmodified by remedies; who believe that nature needs no assistance, or that her conservative efforts require no guidance, stimulus, or restraint. Unless we have entirely mistaken the *modus operandi* of medicines and their therapeutic powers, they are capable in given conditions and under favorable circumstances, as set forth by Copland, of accomplishing the following ends:—

1. Restoring vital and nervous power when primarily depressed, as by shock, mental and physical, sedative and noxious causes, etc., etc.
2. Promoting the various secreting and excreting functions, in other words, the function of depuration.
3. Equalizing the vascular and vital actions throughout the organism.
4. Moderating excessive secretion and excretion, or restraining excessive discharges.
5. Allaying existing nervous excitement, unnatural function, or irregular action.
6. Allaying or moderating increased vascular action, or removing vascular disorder.
7. Correcting or counteracting morbid states of the blood.
8. Allaying morbid irritation.
9. Altering, or more completely changing morbid states of individual tissues, or the structures generally.
10. Preventing or removing exhaustion in its various forms.
11. Removing congestions of blood.

12. Enabling organic, nervous or vital power to resist the slow extension of disease, or overcome its more rapid advances, and to throw off parasitical and other formations.

13. Restoring, as far as may be restored, impaired or lost function.

14. Palliating urgent or distressing symptoms, either when they cannot be removed, or in order to obtain time to ascertain their sources, and for the removal of these sources, or pathological causes.

15. Exciting and directing the mental emotions so as to prevent the extension or aggravation of disease, and to insure or hasten recovery.

It is not to be supposed that these special principles of therapeutics are to be carried out and these indications fulfilled only by the administration of drugs, for they imply the judicious use of all known therapeutic agents, as loss of blood, baths, counter-irritants—all psychical as well as physical appliances. Still, most of them do require the employment of medicines proper, and no calm, unbiased observer can doubt that the latter are powerfully efficient in their accomplishment. A more particular consideration of this subject would lead us into a discussion of the various modes in which medicines affect the solids and fluids—the vital properties of the different organs of the body—but all this must be left till we come to speak of the individual articles of our indigenous *Materia Medica*.

Arnica in Tinnitus Aurium.

BY DR. A. YOUNG, OF MAINE.

THERE seems to be an imperfect knowledge respecting the specific energy of *Arnica* in this country. I find no notice, whatever, in all our medical literature, of the developments made by Mr. Wilde, in his "*Diseases of the Ear*,"* on the use of *Arnica* for that very distressing complaint—buzzing and singing noises in the

* Practical observations on Aural Surgery and the Nature and Treatment of Diseases of the Ear, by William R. Wilde, of Dublin. Reprinted in this country by Blanchard & Lea.

ear. The remarkable energy of this plant on the cerebro-spinal system, and its specific power over *tinnitus*, should be made known to practitioners; and I do this simply from the fact that it is used so little by the profession, and only, as our many publications say, "as a domestic remedy in sprains, bruises," &c. Mr. Wilde says (page 108): "The only medicine I know of which appears to exercise an influence over *tinnitus aurium*, is Leopard's-bane,—*Arnica Montana*,—formerly much in use for rheumatic affections, and as an external application in sprains and bruises." On pages 248-9, he says: "I have found the preparations of *Arnica Montana* of decided benefit; indeed, it is the only medicine which I am acquainted with that seems to possess a specific power over this annoying and usually most intractable complaint. The preparation which I find to be the most efficacious, is the tincture,* of both flowers and leaves, which the patient should commence with by taking fifteen drops in a tablespoonful of the infusion of *Arnica*, with some cordial tincture, three times a day. After a few days the dose should be increased one or two drops daily till it reaches thirty, or even more, unless headache or giddiness be produced, when we should at once lessen the dose, or omit the medicine altogether for a short time. The state of the bowels should be carefully attended to during the administration of this drug."

He well remarks, however, in order to secure the best effects, that "the original disease which produced it" (the *tinnitus*), must be removed, or at least, a decided amelioration of any inflammatory action which may be going on.

We have had patients with a most annoying *tinnitus*, and unaccompanied with deafness, in which we have found the Fluid Extract of *Arnica* (Tilden's) highly beneficial. We commenced with six drops,—*ter de die*,—increasing one drop each day till the patient took thirty drops. The improvement was good, and is permanent to this day. We shall have occasion to refer to this matter again soon.

* To make the tincture, take one ounce and a half of the flowers to a pint of rectified spirits of wine, macerate for fourteen days, and strain.

Hyoscyamus Niger.*(Continued from page 164.)*

CORRECT definitions lie at the basis of the exact sciences, while in all other than the exact sciences, the classification must be more or less unreliable, and subject to change from the inaccuracy of the terms employed, which is a necessary condition to an experimental science, one which advances, not by results flowing out from certain fixed, established principles, but by having its principles modified and corrected by the development of facts, hitherto unknown, which must be accounted for, and which, in fact, constitute the essence of its growth. In the science of mathematics all reasoning depends on the hypothesis employed. A certain definition given to a straight line or a circle, correct reasoning about the properties of either is true, not necessarily in fact, but according to the definition. It cannot be proved, neither is it asserted that either the straight line or circle exist. The reasoning is purely hypothetical. But in physics and the natural sciences, the case stands entirely different; the operation is the reverse. The collection of facts precedes the classification, and the definition of a thing or class of things is the defining, limiting, including all that should be included, and excluding all that should be excluded. Except when everything is known that can be known of a science, the definitions are, in a manner, arbitrary, and by no means easy to be made, and cannot be expected to be universally adopted. The correct classification of articles in the *Materia Medica* has two difficulties to contend against; inaccuracy in the definitions given to their general therapeutic properties; the constant changes that are being made by the developments in the science of medicine, both in the rejection of old modes of application and the substitution or addition of new. However, the latter difficulty could be more easily made way with, if what is meant by the use of the general terms, such as diaphoretic, sudorific, narcotic, anodyne, soporific, anti-spasmodic, etc., was definitely fixed and universally acknowledged by authors and the profession at large.

This whole difficulty may be aptly represented by noting the difference between the work of classifying any article of the vegetable *Materia Medica* botanically and therapeutically. In the former case, with the plant in perfection, it is an easy matter to de-

cide whether it is Phenogamous or Cryptogamous, Angiosperm or Gymnosperm, Polypetalous, Monopetalous or Apetalous; and so on till it is generically and specifically fixed; but, on the other hand, to classify it therapeutically, there are needed years of careful experiment and observation under all possible conditions of place, constitution, form and amount, for facts necessary thereto.

This inaccuracy, referable to both necessity and carelessness, has reacted on the profession to such an extent, that by want of a careful discrimination and limitation of these general terms, what would be of immense, nay, almost incalculable value, has been well nigh rejected and made a matter of inferior moment. The inquiry is not, when investigating a new remedy or the advance of an old, what is the general range, when does it come into relation with others; but to what particular cases is it applied, how is it used: useful, practical, labor-saving questions enough, but unscientific, and to the thinking, rational practitioners wholly unsatisfactory. It may be well enough for the professedly scientific books to state that an article is at once cathartic, emetic, alterative, anthelmintic, hydragogue and sialogogue, but these books are not consulted to discover this as a matter of information, influencing practice, but to discover in what diseases it has proved successful and in what it may be relied upon as pretty nearly a specific. The new books teach little else than certain collated facts without any attempts at generalization, careful or otherwise. "What is writ, is writ" in medicine. There is a morbid fear of change, and the dogmas of the past are clung to with an astonishing tenacity.

Coming within the general scope of the foregoing remarks, but vastly less so than a multitude of others, is the agent under consideration. Having in a previous article considered the *Hyoscyamus* in its special application to particular diseases, let us now inquire into the opinions that have been, and are now held, in regard to its general properties, then the various definitions of the terms employed, and seek to fix, by its physiological and medicinal properties, its true place in the *Materia Medica*.

Cullen classes it among the *sedantia*, i. e. "those medicines which, directly and without evacuation, diminish the motions and powers of the nervous system." "This, like other narcotic substances, will sometimes moderate and restrain hemorrhage, but we are persuaded that except when the hemorrhage manifestly depends upon a par

ticular irritation, this, or any other narcotic may be very hurtful."

"We have, indeed, found the hyoscyamus to be often an agreeable and soporiferous medicine, and we have frequently found it such in persons who, from particular circumstances, did not agree with opium, and particularly because it was less binding to the belly than opium. We must, however, remark here, that it is almost only when the extract of henbane is employed in large doses, that its laxative effects are very remarkable."

Pliny speaks of its virtues in various ways:—*Succus hyoscyami etiam sanguinem excreantibus, nidor quoque accensi tussientibus. Succus hyoscyami cum axungia articulis. Hyoscyamum genitalibus medetur.*

Forskahl mentions this medicine as being brought from Greece to Egypt in his day and administered to procure sleep; adding, that it might with safety be given to children.

According to Royle, it is narcotic, anodyne and soporific; available for a variety of cases where we wish to relieve pain, allay irritability, and procure sleep; having the advantage of not constipating the bowels like opium, and hence it is frequently used with calomel, purgatives and anti-spasmodics.

Mr. A. T. Thompson says, that united with colocynth, he has found hyoscyamus particularly useful in colica pictonum.

Murray, in his *App. Medic.*, Vol. 1, p. 655, has treated fully of hyoscyamus and its use in convulsions, palpitation, mania and melancholy. With regard to its anodyne properties, he says:—*Opio ipso, in somno et quiete inducenda, aliquando potentius fuit.*

Bigelow speaks of it as having been given in colic, particularly colica pictonum, in rheumatism, hysteria, and some puerperal complaints; and externally, as forming a useful anodyne application in hemorrhoids, chordee, and painful ulcerations.

Dunglison marks it as narcotic, anodyne, anti-spasmodic, and slightly stimulant.

Pereira gives it as anodyne, soporific, anti-spasmodic and sedative, and in fomentations, as a topical sedative and anodyne.

Dr. Good declares that hyoscyamus has a tendency to check the pulse, and sometimes to put a total stop to the heart's action with a deadly shock, and to kill the patient in a moment; classing it with digitalis and prussic acid, as used expressly on account of this property.

Dr. Wood says it ranks among the narcotics, and, in its remedial operation, is anodyne and soporific. It is at present used to relieve pain, procure sleep, or quiet irregular nervous action; and it is not supposed to exercise any specific curative influence over particular diseases. The diseases to which it is applicable, it would be useless to enumerate, as there are few complaints in which circumstances might not call for its employment.

According to the experiments of Orfila, the juice, or extract from the leaves, stems, and especially the root, produces in animals a state of sopor, much purer than that caused by opium; most active when applied to the jugular vein, less so when applied to the cellular tissue, and still less when introduced into the stomach.

In a treatise on vegetable poisons, Mr. Wilmer has related the history of six persons in a family who were poisoned by eating at dinner the roots of hyoscyamus by mistake, instead of parsnips. Several were delirious and danced about the room like maniacs; one appeared as if he had got drunk, and a woman became profoundly and irrecoverably comatose, dying next morning. In her case, emetics, clysters, and external stimuli failed.

Another author says:—It causes all the phenomena of narcotic poisoning, such as results from other solanaceous plants, particularly congestion of the vessels of the brain with coma.

The concurrent testimony of these writers is, that the chief property of hyoscyamus is narcotic; where they differ, is in ascribing to it other properties. If, then, this term is appropriately applied, what is the meaning of the definitive word—narcotic? Assuredly, if hyoscyamus is a pure narcotic, all the effects produced on the animal organism, physiological and medicinal, by the administration of hyoscyamus, are, as a whole, narcotic, i. e. excluding none and including no others, in all the stages from the symptoms produced by small doses up to those produced in the last stages by poisonous doses. If all these are to be included, then it is a pure narcotic, and is the standard of the class; but if it possesses certain properties universally manifesting themselves in the first stages of its operation, and has them in common with some other agents, with which its after operations do not coincide, then these first properties constitute the ground of the classification. In this case it is narcotic, but it has other properties in addition. This, then, is a matter of classification on which there ought to be authoritative decision.—(*To be continued.*)

Indigenous versus Foreign Medicines.

BY EDWARD PARRISH.

There are some practitioners who seem to value no medicine which has not come across the great deep, or at least been brought by some long route from a foreign clime—they have an especial choice for something from old England or France, esteeming the productions of these countries, as they do their people, a *little* better than anything that can be grown on this democratic soil. Then, on the other hand, we have a class of philosophers who are so intensely American as to assume the position of *know-nothings* in regard to the productions of foreign countries; they are so impressed with the value of our indigenous *Materia Medica*, for instance, that they cannot imagine what is the use of importing such things from abroad.

The doctrine that every locality produces medicines adapted to the diseases to which it is subject suits the views of this latter class—a doctrine which would exclude us from the use of opium, peruvian bark, the spices, and hundreds of invaluable remedies, many of which have no counterparts on our soil.

Now, it seems to me, there is no philosophy in either of these views. The obvious design of Providence in the distribution of natural objects over all parts of the world is to promote commerce, that great civilizer of mankind, and in proportion as our knowledge extends and our views expand, we shall be led to avail ourselves of the resources which, by the ungrudging bounty of nature, are spread broadly over all lands for the promotion of human comfort and the cure of disease. In England, the idea that Great Britain is the universe, and especially that *this* barbarous land is scarcely worthy the notice of a gentleman or savant, though by no means universal, is certainly entertained by a considerable class, who are not without their prototype in America.

It will be remarked, however, that the intense nationality of feeling here alluded to pertains chiefly to the productions of human skill and ingenuity. The idea of the *natural* superiority of our country over another is too repugnant to common sense to be intelligently entertained, but the prejudice spends itself chiefly in disparaging productions which display intellectual superiority or manual skill or taste. Here our *toady* is at home, and in his

ignorant self-sufficiency exposes himself to the ridicule of sensible men.

The capabilities of mind are the same in all countries, though it is more tramelled in some than others. So universally diffused are its gifts that no civilized nation can claim that it is not greatly indebted to all others; in this view, we, in America, must own ourselves as having less right to be boastful than our transatlantic brethren. In natural productions we can beat the world, but in the laborious cultivation of science, Europe has imposed a debt upon us which many years of our material progress will not suffice to repay.

The scientific physician and pharmacist should be above the petty prejudices and rivalries of sects and nations, and being in the true sense of the word an eclectic, should own himself to be a citizen of the commonwealth of science—a servant of humanity. The true spirit of Americanism is universal and all-embracing, and when its zeal shall be moderated by experience, we may hope it will produce a liberality in science and practical life which will give it a deserved preëminence.

Belladonna in Arresting the Secretion of Milk.

BY H. CLAY SANFORD, EDDYVILLE, IOWA.

I have read in your journal some very flattering notices of the effect of Extract of Belladonna in arresting the secretion of milk; but I have seen no case where it has been tried on one mammary, allowing the other to secrete and be nursed from.

I attended Mrs. M— a few days ago, and on account of large cicatrices formed by a previous ulceration, and the entire loss of the nipple from the left gland, she was very uneasy, fearing that she would have again to undergo all her former agony in having another abscess and ulcerations. Under this fear she early mentioned the matter to me, and inquired if there was any preventive. I must confess I did not encourage her much, but allaying her fear as much as possible, I determined to try the effect of the Nightshade, as I had seen it recommended.

Accordingly, as soon as her child was born, I made a solution of Extract of Belladonna, about one scruple to an ounce of water,

and directed that this should be well applied to the aperture of the nipple, and around as far as the areola extends, once a day, and if any hardness or swelling supervened, to apply it twice daily. On the third day, about two tablespoonfuls of milk were drawn from this breast with the pump, as there had been that morning a little hardness on one side. After this, nothing further was done, except the application once a day. The fifth day this breast was soft and flabby—the other having an abundance of milk for the child. Then the gland had almost resumed a normal position, without milk, and without the least pain to the patient at any time.

Apocynum Cannabinum as an Anti-Periodic.

The anti-periodic properties of this valuable plant have recently invited the attention of the medical profession. Dr. Trent, of Richmond, Virginia, in a communication to us, mentions his mode of using it to be after the following formula:

Pulverized Apocynum Cannabinum - - - - One Dram.

Oil Nigri Piperiti - - - - - Twelve Drops.

Make into twelve pills. Dose, one pill every two hours before the expected chill, until four pills are taken.

Previous to the administration of the Apocynum, he gives two compound cathartic pills. He has reported to the Southern Medical and Surgical Journal some twelve cases of intermittents treated successfully, and having since then treated with equal success six cases, confirms his opinion of the valuable anti-periodic properties of this plant.

The recorded experience of Dr. Joseph Parrish in an aggravated case of ascites, is confirmed by Dr. Samuel C. Waite, of Gouverneur, St. Lawrence Co., N. Y., in the case of a lady sixty-five years of age.

Dr. Knapp found it useful in dropsy, and Dr. Griscom published in the American Journal of Medical Science, XII. 55, a full report of his observations, confirming this opinion.

Professor Merrill relates a case of ascites in a boy twelve years old, which was promptly relieved by Apocynum after other treatment had failed, and the disease had progressed so far in spite of it, that a time had been fixed for the operation of tapping.

Bradycrote Treatment of Yellow Fever by Veratrum Viride.

Drs. O. A. White and Wm. H. Ford, of Charleston, in a communication addressed to the Charleston Medical Journal and Review, state that the fatality of the disease, especially the last season in Charleston, was the cause of their distrust in received modes of practice. Dr. Ford proposed to reduce the frequency of the pulse, "at the febrile onset, as speedily as was prudent to a range ten beats below that peculiar to the person, and to maintain it fifteen or twenty beats below the same standard, according to the intensity of the access and subsequent symptoms. Veratrum was selected from the list of agents which lower the heart's action.

The system, therefore, upon which we decided, was chiefly as follows:—

1st. In adults, when the bowels had not been moved for some days, a saline cathartic was given, and if the headache was intense, five or six evacuations were procured. If the bowels had been tolerably regular or loose, and in delicate women and children, we gave an efficient dose of calomel, alone or combined with some other gentle purgative.

2d. As early as possible after the administration of the cathartic, and often during its action, we began with the veratrum for the primary reduction of the pulse, which was always effected within seven hours. To this end we prescribed five successive doses, the first four of which were given every hour, and the last from an hour and a half to two hours afterwards, irrespectively of age or sex. The tincture was administered without combination, mixed in a little water, for adult males in doses of from 8 to 10 drops; (—4 or 5 minims;) for women, from 6 to 8 drops; for children, between seven and fourteen years, from 4 to 6 drops; for those between three and seven years, from 3 to 5 drops; and for all under two years, 1 or 2 drops. The size of the doses was, moreover, regulated by the intensity of the symptoms, by temperament, irritability of stomach, and the previous duration of the disease. By the administration of Veratrum in this manner, the pulse was sooner or later subdued, and as it sank, became somewhat irregular. The first doses of Veratrum were often vomited in severe cases, but the succeeding ones were commonly retained, and the patient did not again vomit until the pulse was reduced, when the effect of the remedy was occasionally marked by emesis. This vomiting was rarely severe, ceasing of itself upon a temporary discontinuance of the medicine, or yielding readily to common restoratives. The reduction of the pulse was accompanied by a notable cooling of the body, by a well marked diminution of the headache, pain in the back and limbs, of the restlessness and anxiety, of the frequency of respiration, of the congestion of the skin, flushing of the face, tumefaction of the tongue, and injection of the conjunctiva. The patient felt much relieved, and slept tranquilly as soon as the vomiting had ceased; nor did the symptoms tend to recur for some hours, as they would always do, however, if the drug were not again prescribed.

While, therefore, the patient was in this condition, the concurrent treatment was at once instituted. It consisted:—

3d. a. In a continued exhibition of the Veratrum, by which the pulse was maintained throughout the disease, and until the tongue began to clean, fifteen beats or more below its natural range. To effect this, repeated doses half as large as those first given, but not unfrequently quite as large, or nearly so, were administered every second or third hour, suspended while the pulse was low, but promptly resumed as soon as it showed an upward tendency by a rise of ten beats or more. The patient was therefore seen every six hours, and much more frequently in urgent cases, for it was easy to control the pulse when once reduced, difficult to reduce it a second or third time when by neglect it had risen beyond one hundred beats per minute. Careful watching was important, from the consideration that every such rising of the pulse, tending to a complete reëstablishment of the fever in a weakened condition, was regarded as fully as dangerous as a second or third paroxysm in bilious remittent fever. If the pulse was small and frequent, the Veratrum was administered in small and frequent doses. If diarrhea occurred, as it rarely did, it was restrained by mild counter-irritants and astringents, but the Veratrum was on no account suspended, and the pulse was continuously influenced by small but adequate doses. If black vomit supervened and the pulse was slow the Veratrum was plainly not required; if, however, the pulse was rapid, the Veratrum was continued in doses proportioned to its frequency, which were usually small, and were repeated every two or three hours. Without regard, therefore, to the ordinary accidents of the disease, whenever it was required, and only then, the Veratrum was uniformly or specially administered until convalescence was declared.

b. In mercurialization, which was invariably attempted, calomel, and in some cases hydrarg. cum. creta. was pushed in moderate doses without delay, as soon as catharsis had been effected. The mercurial was discontinued when the gums were plainly touched.

a. In the administration of a saline, diuretic and refrigerant mixture, specially directed towards the kidneys as soon as the intensity of the symptoms had been subdued.

In pregnant women the Veratrum was administered as usual, but in doses so regulated as to avoid, if possible, any vomiting, the pulse being nevertheless controlled. If symptoms of abortion had already set in, and during the first three days of the disease, they were in every case effectually arrested, and sometimes did not again recur; but after this period, if a general internal and external congestion had supervened—if the pulse had become quick and *very small*, and if the contractile efforts of the uterus were reëstablished, as well as in cases seen late where they first presented themselves towards the termination of the disease—it was deemed injudicious to continue the Veratrum, death, in such cases, having ensued after a short time. We have, therefore, observed that in nonvomitive, but bradycrotic doses, the Veratrum, in this disease, has appeared to possess anti-parturient properties.

During convalescence, quinine, sulphuric acid and iron were conjointly prescribed. Quinine was strictly avoided in the commencement and progress of the disease. Nareotics of every description were absolutely discarded, or only

administered in moderation, when convalescence was fully established. Laxatives were given by the mouth, if deemed requisite, at any period of the disease, but per anum during black vomit. Blisters were rarely required; sinapisms were of advantage in aiding the retention of the Veratrum when first administered, or when resorted to in consequence of a rise in the pulse; and they were otherwise variously applied as in ordinary treatment. Strict abstinence was enjoined throughout the febrile stage. Stimulants were prescribed in very small quantities, and were rarely required, the Veratrum being discontinued or alternated with them. Convalescence was almost invariably prompt and uncomplicated. Relapses occurred in but two cases, in both of which quinine had been omitted during convalescence. Careful notes were taken at the bedside, and at each visit, from which the following numbers have been evolved. Patients under fourteen years of age were classed as children. Total number treated by Veratrum, 117; recovered, 102; died, 15. Adults, 80; recovered, 66; died, 14. Children, 37; recovered, 36; died, 1.

The first case was treated with Veratrum Viride on August 17th. The subjoined table shows the mean ranges of the pulse under the Veratrum Viride, as compared with its mean range before the Veratrum Viride was given.

Mean frequency of Pulse.	ADULT MALES. Beats per Min.	ADULT FEMALES. Beats per. Min.	CHILDREN. Beats pr. Min.
When v. v. first given	102.5	114.2	137.5
Seven hours after - -	61.8	65.2	71
Remainder of disease -	52.8	64.7	74.8

We have received the following communication, in answer to the Review published in the last number of our Journal. We give it place, that our readers may peruse both sides, then judge for themselves.

Review of Dr. Tully's *Materia Medica*.

We like this Review as a whole. The author undertook a very difficult task, and the manner in which he has accomplished it, proves him to be, we think, one of our ablest and most independent medical scholars. That it is difficult to review a work like Dr. Tully's, is shown by the fact that not one of the editors of our medical journals has seen fit to undertake it. Here is an *original* American medical work, written by one who is admitted to be a profound medical scholar, or, as our Reviewer expresses it, "one of the solid men of the profession." Many months have elapsed since the work was out, and yet the guardians of our medical literature are silent. It would be preposterous to suppose that anything but the difficulty of the task has deterred them. In our country, where newspapers are free, journals are free, and men are free; where it is considered insulting to accuse any one of a want of independence; where an editor, especially, would be indignant, even were it hinted that he was afraid

to express his opinion;—I say, that when such a state of things exists, we must look in some other direction for a solution of the difficulty: nor can we suppose that our medical editors, the shepherds of the profession, have been wanting in vigilance. If the new work, in their opinion, is a wolf in sheep's clothing, they certainly would have sounded the alarm; silence under these circumstances would be treason, and we cannot admit for a moment that so many respectable men could neglect a duty so important. It is not, then, want of independence or want of vigilance on the part of our medical shepherds. I cannot believe that an unworthy motive, a desire to kill by neglect, influences them. No, it must be the difficulty of the task and nothing else.

Although we like this Review as a whole, yet we do not agree with the Reviewer in some things. He has doubts about the advantages of Dr. Tully's nomenclature. To us this nomenclature is one of the crowning excellencies of the work. In regard to the names of the classes being derived from "ancient classical Greek," it seems to us that the utility and propriety of such a derivation was settled by Linnæus a century ago. Is it not safe to follow such authority?

Our Reviewer says "new and additional names do not give new knowledge—do not enlarge our ideas, or render them clear or more accurate." Let us consider a few facts which have a bearing on this subject. Formerly an article in common use by physicians was called *white citriol*; after the composition of it was discovered, it received a *new name*—sulphate of zinc. Now, does not this new name give "new knowledge?" Does it not "enlarge our ideas," and render them clear and more accurate? No one acquainted with chemistry can hesitate a moment to answer this question in the affirmative, and large numbers of similar new names might be mentioned, which would go to prove that nomenclature was of primary rather than "secondary" importance. Our Reviewer admits that where new ideas are to be classified for the first time, it is "highly proper" that they should be furnished with names, and that these names should be regularly and classically formed. With these exceptions, how many new names have been added by Dr. Tully? We can find none.

We agree perfectly with the Reviewer, that "we cannot allow that anybody has a right to coin" names, "except on the gravest occasions and for the most urgent reasons." We leave it for the profession to decide whether or not Dr. Tully is anybody; and whether or not here is a *grave occasion* and a *most urgent reason*.

In the latter part of the Review we have a little more about names; and, by the way, our Reviewer seems to dislike new names quite as much as Dr. Tully dislikes the anti-phlogistic salts. He says, "we do not like the terms *oresthetics* and *antisbestics*. They are hard, uncouth. To the great majority of medical men they are without special significance. What is more, they seem to us unnecessary. Names when not needed are unmitigated nuisances; they stand in the way of knowledge, and it is well if they get pitched into the gutter." Let us consider whether the new names or the anti-phlogistic salts deserve most to be pitched into the gutter; though Dr. Tully has not advised this

summary process in regard to the latter. In the paragraph above the one we quote from, in speaking of the three classes, euphrenics, orethetics, and anti-bastics, he says, "Dr. Tully has shown three powers to exist where but one has been supposed." Here, then, by the admission of our Reviewer, we have, at least, two new classes to be named, and in another place he says that "where new ideas" are to be "classified for the first time," it is "highly proper" that these classes and powers should be furnished with names, and that these names should be regularly and classically formed. If it is "highly proper" to do this, it seems to me *not* well if these names get pitched into the gutter. Our Reviewer seems to have a strong affection for the word *stimulant*, and thinks it will not be "discarded." We presume he is right, and we always expect to hear physicians talk about white vitriol, blue vitriol, and green vitriol; nervine, arterial and acrid stimulants. We always expect to hear some physicians say that they "bleed to invigorate," that tartar emetic and nitre are stimulants, (acrid, I suppose,) because they sometimes produce inflammation of the stomach and intestines. We do not know a term in any of the departments of medicine which has produced as much confusion and bad practice as the term *stimulant*; it has been applied to articles of opposite powers as well as to those which resemble each other; in a word, it is a term which we think should be discarded, and we think that the thanks of the profession are due to Dr. Tully for his efforts to rid us of it.

Our Reviewer remarks that anti-phlogistics "are not favorite remedies" with Dr. Tully. It is quite natural for one to dislike anything which, in his opinion, does injury or mischief. I once heard of an eminent surgeon who always decried the use of red precipitate ointment, because he had seen a number of cases where the inappropriate use of it had done harm. Dr. Tully only condemns the use of anti-phlogistics during the prevalence of an asthenic diathesis; and, admitting the existence of this diathesis at the present time, few men of experience will disagree with Dr. Tully. However, the practical question to be decided is, whether or not this change of diathesis has taken place; and we are sorry that our Reviewer did not discuss this point.

Let us consider a few facts which go to prove that such a change has taken place. Whenever we have conversed with old practitioners in regard to the treatment of acute diseases fifty years ago, they all admit that the anti-phlogistic practice, which was successful at that time, is now positively injurious. Some account for this fact in one way, and some in another. It is supposed by some that our fathers used anti-phlogistics unnecessarily, and hence we find that about thirty years ago a great deal was said in the Athens of America about the *expectant plan* of treatment. It was found, then, that the anti-phlogistic plan did harm rather than good. Cases were left to nature and did well, at least much better than under the depleting system. This was the true origin of the homoeopathic system, for the expectant plan was known in Europe previous to this time. Subsequently, in the same place, much was said about *self-limited diseases*, and more recently about *rational medicine*; all, however, going to show that the anti-phlogistic plan was a pernicious one. No attempt, so far as we know, was made to account for this failure of the anti-

philogistic plan to cure disease. Dr. Tully has given us a philosophical reason for this failure. If any man can give us a better or more philosophical one, let us have it. Until then, we accept the explanation of Dr. Tully, and believe it conducive to rational and successful practice.

But we have already exceeded the limits we prescribed to ourselves, and will only add, that we hope all will read the Review, and what is better, read and study the book, and "master its principles."

Editorial.

THE published proceedings of the last meeting of the American Pharmaceutical Association furnish additional evidence of the real importance of the Association to American science, and demonstrate the activity and zeal with which its members are prosecuting their inquiries into the various departments connected with the science of pharmacy. Previous to the establishment of this Association as a distinct body, the members of the profession, pursuing their learned and untiring researches, had been, by no means, idle or lacking in zeal in cultivating an intimate acquaintance with pharmacy on an independent basis. The results of these investigations have been made known to the public mainly through the medium of the American Journal of Pharmacy, a periodical devoted exclusively to the interests of this branch of medicine, whose pages, since the year 1832, have been adorned with many of the most valuable contributions to medical literature ever published in this country. The objects that the Association has in view are to encourage and foster a free spirit of inquiry and investigation, and to diffuse general pharmaceutical intelligence. No branch is in any degree slighted, and no predominance is given to any one department to the neglect of another. Whatsoever relates to the general relations of botany, chemistry, and the more specific indications in the preparation of drugs, their analytical composition, their reactions and combinations, and in whatsoever direction there are opportunities for research or improvement, there the investigations are carried. This body is composed of the druggists and apothecaries of the country, and meets annually to hear the reports of committees and individuals on the assigned subjects of the previous year, as also voluntary contributions on topics having reference to the general subject of pharmacy.

One great object to be attained by the Association, is the general education of the dispensors of drugs, that those who deal in medicines may come to an accurate knowledge of their purity, and be educated into a thorough understanding of the *rationale* of the many manipulations belonging to their profession, and necessary to be almost daily practiced by all who are engaged in it.

Perhaps in no country in the world is the proportion of apothecaries to the population so great as in ours; hence the responsibility the apothecary incurs—not the less to the community at large than to the medical profession. In the prosecution of his regular business, understanding his position, he should feel

it a duty to the profession and the community to avail himself of every means in his power to thoroughly qualify himself. It is not enough that he mechanically discharges his daily dispensing duties, but he should cultivate a taste for scientific investigation, understand the changes and reactions that occur, not only as a matter of desirable knowledge, but with a view to experiments and discovery, and communicate his observations to the Association, that the profession at large may be benefited, and new facts not previously comprehended, but of great value, be brought into notice, thus making himself an instrument of usefulness to the people, not less than the medical profession.

It is true that we have not arrived at that point where the Association can insist on those qualifications, as is the case in some of the countries on the continent. In no country is the practice or qualifications of the apothecary so little interfered with by legislative enactments as in this: he is left entirely to his own course, and subject only to the self imposed regulations of this efficient, energetic, and self-educating association; and our hope is that the intelligence it embodies, and a healthful public sentiment will produce all *needful* regulations.

The conditions for graduation at the Philadelphia and other Colleges of Pharmacy are much more severe than those for graduation at any medical school in the country; and so far as the influence of those interested in this particular school is concerned, it is a step in the right direction. It is an undoubted fact, however, that the graduates of this or of other schools of pharmacy constitute but a small proportion of those engaged in the sale and dispensing of drugs. The intelligent practitioners of medicine can but heartily sympathize with any movement whatsoever calculated to increase the skill of, and consequently their confidence in, the apothecaries and dispensors of drugs, whether in the large cities or the provincial towns, and particularly will they be ready to encourage an association numbering on its roll of members the best pharmacutists in the land, and which, as it grows more mature, will be more and more chary of its interest and more and more discriminating in its admission to the ranks of membership.

The revision of the Pharmacopœia is a matter of interest to every apothecary in the country. It is a work that should embody a list of *materia medica* and medicinal preparations suited to the wants of every section of the country; and it is contended that intelligent apothecaries, daily supplying the wants of physicians, must necessarily be well informed of the wants of the medical profession. These facts communicated to the committee having this subject in charge will greatly assist them, and make it a complete and valuable work.

In every number we shall publish extracts from the reports of the various committees, as far as our space will allow.

"The Syllabus of a course of study, intended as an aid to students of pharmacy who cannot avail themselves of regular instruction," by Prof. Procter, is very comprehensive, and shows an appreciation of the young student's wants and position, which should commend it to their especial attention, and should be studied until they master its plans and teachings.

The prefatory note is as follows:—

"The American Pharmaceutical Association, being aware of the limited opportunities for theoretical instruction which appertain to the pursuit of pharmacy, as usually conducted out of the large cities of the United States, as well as in very many stores within those limits, have deemed it advisable to issue this Syllabus of advices and studies for the aid of all those beginners or apprentices whose position renders such aid useful and appropriate, in the hope that it will prove a valuable help to them in the prosecution of those studies so necessary to the pharmacist and druggist, and without which no dispensing apothecary is able to fully meet the rightful demands of the medical profession."

EPIDEMICS AND THEIR CAUSES.—Dr. Southwood Smith, in a valuable series of lectures delivered by him in Edinburgh, on the subject of epidemics, dwelt with considerable particularity on the fact that all epidemic diseases—the plague, black death, sweating sickness, cholera, influenza, &c.—are fevers. Cholera was usually preceded, he stated, by influenza; and if the patient be saved three days, the fever and other symptoms are curable. He argued that very active animal and epidemic poisons are generated by the over-crowding of human beings, and when to this are added deficient electricity in the atmosphere, unusual prevalence of mist, haze or fog, stillness of the air, and augmented barometric pressure, then there existed an epidemic constitution of things, inducing cholera.

We call the attention of the profession to the treatment adopted by Dr. H. G. Davis, of 67 Union Place, New York City, in Pott's and Hip Joint Disease, Lateral Curvature of the Spine, &c., &c.

Our attention has been called to the success of his treatment by a friend who has had a little boy under his care. The apparatus devised by Dr. Davis, aims at retaining the parts in their natural position, thereby preventing deformity, and it allows the patient to take out-door exercise, which is indispensable for sustaining general health. The Doctor has, we are informed, the approbation of leading members of the profession, and among others upon his circular, refers to Dr. Gurdon Buck, whose recommendation is sufficient to establish his claims to the confidence of those requiring treatment.

Communications should be forwarded so as to reach us by the 10th of the preceeding month, to ensure their early insertion.

Subscribers who have not received the Journal regularly will please write, and we will forward the missing numbers.

Physicians who wish this Journal regularly will please notify us to that effect as soon as possible.

CORRESPONDENTS will oblige, by writing plainly their names, town, county, and state.

Pharmacy.

Compound Syrup of the Iodo-hydrargyrate of Potassium and Iron. By Joseph K. Young.

Being called upon to prepare a formula containing the red iodide of mercury and iodide of iron in solution, to be used in cases of secondary syphilis combined with scrofula, the following suggested itself as being a good one, and an elegant mode of administering the iodides in combination.

Iodine,	-	-	-	-	-	64	grains.
Iron Filings,	-	-	-	-	-	32	"
Red Iodide of Mercury,	-	-	-	-	-	2	"
Iodide of Potassium,	-	-	-	-	-	1½	"
Sugar,	-	-	-	-	-	3½	oz. avd.
Water,	-	-	-	-	-	2	"

Mix the iodine with three drachms of the water and add the iron; when combined filter into the syrup, (which is made with an ounce and a half of the water;) the red iodide of mercury and the iodide of potassium are triturated with the remaining drachm of water and added, the whole to measure four fluid ounces. A little orange flower water added makes it very agreeable. The dose recommended is about one teaspoonful, which is equivalent to one-sixteenth grain of the red iodide of mercury, and two and three-quarter grains of the iodide of iron.

Formula for Compound Sulphur Ointment.

The following is the formula for the compound sulphur ointment, successfully employed by Messrs. Startin & McWhinnie, at the Hospital for Diseases of the Skin, against scabies, favus, and true ringworm, diseases which depend upon parasites which it is necessary to kill.

Of sublimed sulphur, half a pound; of the ammonia chloride of mercury, half an ounce; and of the sulphuret of mercury, half an ounce; to these, well rubbed together, add four ounces of olive oil, sixteen ounces of fresh lard, and twenty minims of creosote. It will be seen that we have here in combination three different drugs, each possessing great efficiency in the destruction of insect and fungus life. The object in view, that of obtaining a vigorous compound, which, at the same time, shall not be irritating to the skin, is, we believe, exceedingly well attained.—*Medical Times and Gazette.*

Mixture of Collodion and Castor Oil in Severe Burns and Scalds.

Several cases of severe scalds and burns are reported by the surgeon of the Kings College Hospital, in which a mixture of collodion, two parts; castor oil, one part, was painted over the entire surface of the burn several times, so as to form a complete covering, and entirely exclude the atmosphere, without obscuring the surface of the sore from view. It has a pleasing odor which counteracts the unpleasant emanation generally attendant upon burns, lessens pain, and when applied, the sloughs appear to be less deep than usual.

Glycerine and Tannin.—Sore Nipples.

Dr. R. E. Paine, of Jay, Maine, recommends glycerine and tannic acid, equal parts, as *the best application for sore nipples* and excoriations of other parts. The tannic acid readily dissolves in the glycerine.

Baccharine Proto Sulphate of Iron.

It is very difficult to prevent super-oxygenization of sulphate of iron; while, for various chemical and pharmaceutical purposes, it is of importance to have a pure sulphate of the protoxide.

M. Latour, chemist, recommends to dissolve two hundred parts of pure proto sulphate in one hundred of boiling distilled water, and fifty parts of sugar sandy in thirty of boiling distilled water. Mix. Filter rapidly, and crystallize of from 95 to 100 degrees. The crystals are oblique, rhomboidal prisms; should be dried on paper, and kept in dry bottles, closed; are found to consist of sulphate of the protoxide, 54.57; water, 32.50; sugar, 12.93.

Formula for making a Syrup of Phosphate of Iron and Ammonia. By Joseph Roberts.

Take of Sulphate of Iron,	278 Grains.
Phosphate of Soda,	359 "
Glacial Phosphoric Acid,	896 "
Liquor Ammoniaë,	q. s.
Sugar,	5 1-2 Ounces.
Water,	q. s.

Dissolve the phosphate of soda and the sulphate of iron separately, mix the solutions, and wash well the resulting phosphate of iron; then to one-half of the phosphoric acid dissolved in one ounce of water, add liquor ammonia until it is saturated. To the other half of the phosphoric acid dissolved in a like quantity of water, add the moist phosphate of iron, and dissolve by a gentle heat. Then add the solution of phosphate of ammonia and the sugar, and evaporate to seven fluid ounces.

This gives a syrup containing thirty-six grains of phosphate of iron, thirty-eight grains of phosphate of ammonia, and twenty-eight grains of phosphoric acid to the fluid ounce, or four and a half grains of the iron salt, four and three-quarter grains of the ammoniacal salt, and three and a half grains of the acid to the teaspoonful.

The preparation seems to be a stable one, but whether it be a chemical compound in which the iron and ammoniacal salts exist as a double phosphate of iron and ammonia, or whether the mixture be merely mechanical, I am not prepared to say—but this I feel confident of, that the addition of the phosphate of ammonia to the solution of the soluble phosphate of iron, adds greatly to the stability of the salt, and seems to counteract, in a remarkable degree, its proneness to pass into its insoluble state.

Of the therapeutic value of the preparation, of course, I can say nothing, but merely offer it as a syrup, holding in solution a large amount of phosphatic salt.—*Jour. and Trans. Maryland Col. Pharm., June, 1858.*

Hydrocyanate of Iron in Neuralgia.

The preparations of iron have obtained great reputation for the cure of neuralgia, especially the hydrocyanate of iron, which has been used by M. M. Dupay and Jolly, in the following form:—

Hydrocyanate of Iron,	18 grains.
Sulph. Quinine,	12 "
Extract Opium,	1 "
Conserve Roses,	q. s.

Make 12 Pills.

Fluid Extract of Veratrum Viride.

The attention which has been given within the last three years to the therapeutic properties of *Veratrum Viride*, has fully confirmed the observations of Dr. Tully, as stated at length by Dr. Osgood in his very able paper upon this agent, published in the American Journal of Medical Sciences in 1835. Recent observations and a more general experience have extended its application.

Its properties are a resin and an alkaloidal principle, which are yielded to alcohol and diluted alcohol.

Its therapeutic properties are stated to be an arterial sedative of great power—reducing the frequency of the pulse to forty per minute—expectorant, diaphoretic, alterative, deobstruent, emetic, nervine, somewhat narcotic, &c. These properties are published at length in a pamphlet upon its powers and properties.

Having for some time prepared a fluid extract of this article, I state, in answer to the many inquiries made as to the strength and manner of preparing it, that each fluid ounce represents one ounce of the crude root, or dram for dram, calculating 60 minims or 120 drops to the fluid dram. Each grain is represented by one minim or two drops.

The root is digested in alcohol of 90° for ten days, then diluted alcohol is added until it is exhausted of all its medicinal properties. The solutions are evaporated in a vacuum at 100°, and alcohol again added of sufficient specific gravity to hold its medicinal properties without deposition, and give one pint of fluid extract for every pound of root treated.

In all cases the root should be collected in the fall, immediately as the leaves begin to wither. Such is taken as the standard, and all other roots are brought to this standard by careful analysis, that the preparation shall yield an uniform or equal amount of active constituents.

Prepared in this way, the dose is much less than that stated for the tincture, assuming the minimum dose of the tincture to be four drops. The dose of this preparation should be two drops, as all the trials and observations we have made show it to possess double the strength of the tincture as recommended by Norwood. The opinion of physicians generally is that the minimum dose should be stated at one-half of that we have uniformly named. We have, therefore, reduced the dose to commence with to two drops, increasing one drop every portion given; but for greater convenience and certainty of administration it is suggested to combine it with an equal measure of milk, simple syrup, or syrup of squill, and give, as the minimum dose, four drops, increasing each portion given one or two drops, according to circumstances.

In combination with ipecac or compounds of cherry, &c., the dose is easily and accurately regulated.

An over dose is promptly relieved by laudanum or brandy, or by a syrup of sulphate of morphia and tincture of ginger. In fact, morphia and laudnaum, in sufficient doses, are said to be perfect antidotes to the ill effects of an over dose.

NEUTRALIZING CORDIAL.

Furnished by DR. DAVIS, Charleston, Ill.

Rhubarb.....	Right Ounces.
Saffron.....	Two "
Cardamom Seeds.....	" "
Nutmegs.....	" "
Soda, S. C.....	" "
Essence Peppermint.....	" "
Sugar (refined).....	Two Pounds

Brandy and water q. s. to obtain the strength.

Dose—One to two teaspoonsful.

LEPTANDRIA CORDIAL.

Furnished by DR. DAVIS, Charleston, Ill.

Leptandria.....	Eight Ounces.
Rhubarb.....	Four "
Bayberry.....	" "
Ginger.....	Two "
Cloves.....	One Ounce.
Peppermint.....	Two Ounces.
Myrrh.....	" "
Soda, S. C.....	" "

Alcohol and water q. s. to obtain the strength.

Dose—One to two teaspoonsful.

CHERRY CORDIAL.

Furnished by DR. DAVIS, Charleston, Ill.

Wild Cherry Bark.....	Sixteen Ounces.
Poplar Bark.....	" "
Sumach ".....	" "
Peach Meats.....	" "
Brandy (good).....	One Gallon.
Sugar (refined).....	Eight Pounds.

Dose—One to two teaspoonsful.

One of the most pleasant and efficient remedies ever got up for bowel complaints, requiring a tonic and astringent remedy.

ANTI-BILIOUS CATHARTIC PILL.

Furnished by Dr. MYERS, South Bend, Ind.

Pulv. Rhubarb.....	Two Scruples.
Podophyllin.....	1½ Scruples.
Leptandrin.....	One Scruple.
Extract Nux Vomica.....	Twelve Grains.
Extract Hyoscyamus.....	One Dram.
Oil of Anise.....	Eight Drops.
Syrup.....	q. s.

M. Make sixty pills.

FEVER AND AGUE PILL.

Sulphate of Quinine.....	One Grain.
Leptandria.....	Three Grains.
Podophyllin.....	Quarter Grain.
Dose—One pill two or three times per day.	
	<i>Dr. Ware.</i>

RHEUMATISM.

Tincture of Strychnos.....	One Ounce.
" Cimicifuga.....	Two Ounces.
Muriate of Morphine.....	Twelve Grains.
Dose—Thirty to sixty drops, four times per day.	
	<i>Dr. Horton.</i>

TONIC.

Furnished by ASA F. PATTEN, Warner, Merrimack Co., N. H.

Citrate of Iron, sol.....	Half Dram.
Sulphate of Iron.....	Twenty Grains.
" of Quinine.....	Two Scruples.
Simple Syrup.....	Four Ounces.
Oil of Sassafras.....	Ten Drops.
Mix. Take from one to three teaspoonfuls three or four times a day.	

DIARRHŒA PILL.

℞t. Argenti.....	Quarter Grain.
Sulph. Morphine.....	Eighth "
Pulverize with Gum Arabic.—SMALL PILL.	
Dose—One pill two or three times per day.	
	<i>Dr. Pratt.</i>

LEUCORRŒA.

Ferri et Ammonia Sulph.....	Three Grains.
Fluid Extract Cimicifuga.....	Thirty Drops.
" " Colomba.....	" "
" " Cubebe.....	Fifteen "
	<i>Dr. Terrell.</i>

ELIXIR CALISAYA BARK.

Take of Calisaya Bark.....	Sixteen Ounces.
" Orange Peel.....	Two "
" Cardamom.....	Two Drams.
" Cinnamon, (Ceylon,).....	One Ounce.
" Alcohol.....	5½ Pints.
Water q. s. to displace 6½ pints tincture, then add three pints of simple syrup and half a pint of rose water.	

Correspondence.

SARATOGA SPRINGS, Dec. 10, 1858.—DR. HAMILTON.—I am highly pleased with the December No. of your Journal. It ought to be in the hands of every practitioner. Consider me a life subscriber.

UTICA, Dec. 7, 1858.—DR. M. M. BAGG.—Though I had read cursorily the previous Nos. with interest and profit, yet the improved appearance, and the additional promises of the last (December) No. make me desirous to receive the work with regularity.

SKANEATELES, N. Y., Dec. 9.—DR. L. BARTLETT.—Enclosed please find subscription to your excellent Journal, from which I have derived many useful hints.

FAYETTE, N. Y., Dec. 9.—DR. FLECKENGER.—It affords me great pleasure to read the valuable information contained in your Journal.

TORONTO, U. C., Dec. 9.—DR. WILLIAMSON, EDUCATION OFFICER.—Am quite pleased with the nature and character of the work.

WHITE HOUSE, HUNTERTON CO., N. J., Dec. 17, 1858.—DR. JOHNSON.—I have perused your numbers with both pleasure and profit. Your enterprise meets a desideratum in the wants of the profession.

RTCHIE C. H., VA., Dec. 12, 1858.—DR. J. M. LATHROP.—In the early part of the year I had not learned that they were worth preserving, but by giving them more attention I have become convinced of my mistake.

WASHINGTON, N. C., Dec. 14, 1858.—DR. JOS. R. H. CARMER.—I am exceedingly obliged to you for furnishing me with your Journal for the past year. It is very valuable beyond a doubt, and I could in no way dispense with it, as I glean a great deal of information from it.

MEMPHIS, TENN., Dec. 17, 1858.—DR. SAML. GILBERT.—Gents:—Your valuable Journal of *Materia Medica* was sent me by some friend, and I find it to be the work that the profession long have wanted. I prize it much, and wish to be a regular paying subscriber as long as I practice.

BLACK EARTH, WIS., Dec. 20, 1858.—DR. THOMAS EMERSON.—Your Journal is invaluable in the practice of medicine, and it meets the wants of every medical man. Sir, I am an old physician—have practised over 40 years, and am not surprised at the great march of improvement in pharmacy and chemistry. We live in an age of science, and may you continue to improve until we can meet all the diseases that the human body is subject to, is my sincere hope and wish.

NEW CASTLE, VA., Dec. 10, 1858.—DR. THOS. H. B. DILLARD.—I would not be without the little *Monthly Visitor* with its stores of varied and useful knowledge (especially to the country practitioner), for double the amount of subscription price.

WEST LIBERTY, IOWA, Dec. 15, 1858.—DR. ALBERT ADY.—Send me your Journal of *Materia Medica*, as I intend to be a permanent subscriber. It is certainly one of the best things out.

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T H E
JOURNAL OF MATERIA MEDICA
AND
PHARMACEUTIC FORMULARY.

New]	FEBRUARY, 1859.	[Series.
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**On the Medicinal, Naturalized Exotics and Indigenous
Materia Medica of the United States.**

BY CHARLES A. LEE, M.D.

NUMBER II.

IN the January number of this Journal I briefly alluded to a class of practitioners, of whom Sir John Forbes may stand as the type as well as the leader, who are not only sceptical as regards the utility of any active treatment of disease, but who question the power of medical art to exert any important controlling influence over its progress, unless in exceptional cases. This school, if we are to believe their statements, would resolve all treatment into a patient, do-nothing expectancy, as the most philosophical—the safest, surest, most successful method of managing diseases. They recognise, as we all do, the autocracy of nature in the cure of many diseases; but when they claim that it is not only useless but injurious to attempt to suppress or modify the morbid processes by active measures, we find their position a mere assumption, unsustained by any reliable facts or established statistics. Dr. Forbes concedes the whole ground in dispute when he says—‘As some of the agents capable of permeating every part of the body are known to be possessed of powers capable of modifying vital action, both dynamically and chemically, it is impossible to avoid receiving the conception and entertaining the conjecture, that they may thus directly modify diseased states, whether functional or structural, and so relieve or cure diseases in a direct and specific manner. It is even extremely probable that they do so, and it

seems a most legitimate object of our tentative art to endeavor by direct experiment to ascertain whether this probability can be converted into certainty."—*Nature and Art in Disease*, p. 221.

We shall aim, then, in this series of articles to show that we have numerous naturalized exotics and indigenous medical plants possessing properties capable of modifying vital action, both in its healthy and diseased states, and in many cases, in what may be called "a direct and specific manner." Again says Dr. Forbes (*Lec Cit*, p. 211), "There does not appear to be any sufficient reason, *a priori*, why the same or similar results, which we see taking place on the skin and mucous surfaces of the body, or in its cavities or passages, on the direct application of medicinal and chemical agents, may not also take place in the intimate tissues of organs, on the same or analogous agents being conveyed to them by the blood; and still more, in the blood itself, in the cases where we believe the *materies morbi* to exist primarily in the blood." Now, what seems so probable, *a priori*, we shall attempt to establish by actual observation and experiment, and if we fail, then we shall feel disposed to recommend to the medical profession to resolve itself into a general hygienic and prophylactic body, confining its efforts in future to the establishment of sanitary laws and regulations, public and private, for the prevention of disease. As a committee of the whole on public health, its functions would be important and valuable. We believe, however, that medical art embraces a far wider range of action, and a more extended sphere of usefulness, and that daily observation justifies the conclusion that medicinal agents have power, when properly used, to modify, control, and arrest disease.

In treating of the various articles of our vegetable *materia medica*, three plans suggest themselves for our adoption, viz:

1. An arrangement founded on their therapeutical properties.
2. An arrangement based on their physiological effects.
3. One derived from their natural historical affinities.

In regard to the first, as the curative and remedial powers of medicines are only relative and conditional, never absolute and constant, it is evident that all such arrangements are wholly impracticable. We have no specifics, no drugs, which will cure certain diseases under all circumstances. As has been observed, such classification, if attempted, would be an arrangement of diseases

and an enumeration of the medicines which experience had found, frequently, though not invariably, beneficial for each.

In regard to the second plan, it may well be doubted whether we are as yet sufficiently acquainted with the properties of our indigenous plants to arrange them in a physiological classification: at any rate, such an attempt has never yet been made. It seems to me, however, that the time has come when such an arrangement may, at least, be attempted, however imperfectly carried out; and many reasons could be offered to show that it may be attended with some important advantages. It is very evident that all our prominent indigenous articles can be thrown into groups and arranged on physiological principles, while, it must be confessed, there are many others, probably of equal medicinal value, whose place could not, at present, be readily assigned. They will, however, easily fall into rank when their properties are more accurately ascertained. It should be understood that, in a physiological arrangement, two principles are necessarily involved—first, as regards the organs or parts affected; second, the nature or quality of the action set up. As we are unable, however, to discriminate in all cases between their primary and secondary effects, neither principle can be adopted to the exclusion of the other. It is manifest that, in regard to the parts affected, most medicines operate through the agency of the nervous system; and that, considering the nature or quality of their action, a majority, with great propriety, may be termed *alteratives*.

With respect to a classification based on their natural affinities, a very slight acquaintance with the subject must satisfy us of its disadvantages. It is a doctrine, however, which may be traced far beyond the age of Cæsalpinus, to whom it has usually been attributed, that those plants which resemble each other in their external appearances are endowed with analogous medicinal properties. Adopted by Linnæus, it has found able supporters in Gmelin, Jussieu, Barton, Decandolle, Diesbach, and others; while Pereira, the most distinguished writer on the materia medica of the present age, makes it the basis of his own arrangement. Indeed, it would seem that, as vegetable substances owe their peculiar qualities to the structure and consequent action of the organs producing them, differences in the structure of an organ might be expected to be attended with corresponding differences in the qual-

ities of its products. It would thus follow that the medicinal qualities of plants of the same natural order should be analogous; and that if one vegetable species, for example, should be suitable for nutriment, other species of the same genus, or even of a different genus, but of the same order, should also be adapted for a like use; while, on the other hand, if any particular species should be found injurious, neighboring species should also prove more or less so. Experience certainly proves that, in quite a large number of instances, there does exist an analogy between the exterior forms and the medicinal properties of plants to such a degree that we can sometimes predict the active principle and mode of operation of a given vegetable by merely knowing to what part of a natural arrangement it belongs. Thus *Gramineæ*, *Cruciferae*, *Melanthaceæ*, *Coniferae*, *Labiatae*, *Mulaceæ*, and *Ranunculacææ*, are familiar illustrations of the accuracy of these observations. But these, unfortunately, are only exceptions to a general rule. When we pass under review the plants belonging to the natural orders, *Umbelliferae*, *Cucurbitaceæ*, *Solanaceæ*, &c., we find that some belonging to the same order possess entirely different medicinal properties; while plants of dissimilar structure and belonging to different orders, are sometimes endowed with similar or analogous qualities. Professor Lindley has greatly exaggerated the advantages of such botanical affinities to medical men; for while extolling the superiority of natural over artificial systems, he goes so far as to say that a knowledge of the properties of one plant is a guide to the practitioner, which enables him to substitute some other with confidence which is naturally allied to it; and that physicians in foreign stations may direct their enquiries, not empirically, but upon fixed principles, into the qualities of the medicinal plants which nature has provided in every region for the alleviation of the maladies peculiar to it. One great difficulty connected with this subject is, that the characters which vegetables exhibit are of such uncertain and variable degrees of importance that it is often difficult to say what value should be attached to any given modification of structure; though it is very obvious that characters which are purely physiological, that is, which depend on differences of internal anatomical structure, are of much more value than varieties of form, position, number, &c., which are mere modifications of external organs. Another difficulty is, that

as objects resemble each other more or less in a multitude of different respects, it is impossible to indicate all their affinities in a lineal arrangement, and yet no other can be practically employed. In fact, the difficulties connected with the subject of a natural classification are so numerous and great that it may well be doubted whether they will ever be wholly overcome. Whoever attempts to adopt such a system must be satisfied to grope his uncertain way with what light he has, hoping that ere long some second Linnæus may arise, if not to bring order out of confusion, at least to perfect those systems, called natural, but which nature, in their present conditions, refuses to own. We come then to the conclusion that natural history affinities are of no absolute value, as a general rule, as a means of ascertaining the medicinal powers of new and previously unemployed articles, though useful as auxiliary to other means—that they may be often used advantageously as a clue to guide us in our investigations, though too uncertain to be relied upon alone, or independent of other indications.

Polygala Senega.

(*Seneka*.)

THE root of this plant was first introduced into medicine as a remedy for the bites of venomous animals in the early part of last century by Dr. Tennent, a Scotch physician residing in Virginia.

It has repeatedly been the subject of chemical investigation, and its virtues appear chiefly, if not exclusively, in the principle which Mr. Quevenne called *polygalic acid*, and which resides in the cortical part of the root.

Senega possesses acrid and stimulant properties. In small doses it is diaphoretic, diuretic, and expectorant; in larger doses, emetic and purgative. It appears to excite more or less the vascular system; to promote the secretions of the kidneys, skin, uterus, and bronchial membrane, and to exert some influence upon the nervous system. Its expectorant virtues are those for which it has been chiefly employed; and as an expectorant, it is employed in cases not attended with acute inflammatory action, or in which the inflammation has been in a great measure subdued. It is recommended as a local stimulant in relaxed sore throat, in chronic catarrh, as a diaphoretico-diuretic in rheumatism, in secondary

croup, &c. Pareira says: "It is valuable in the latter stages of bronchial or pulmonary inflammation, when this disease occurs in aged or debilitated and torpid constitutions; and when the use of depletives is no longer admissible, it appears to reëstablish a healthy condition of the secreting organs, to promote the resolution of the morbid deposits, and give strength to the system. I usually administer it with ammonia, which appears to promote its beneficial operation. Frequency of the pulse and a febrile condition of the system are by no means to be regarded as impediments to the use of this medicine. It has also been used in chronic catarrh and humoral asthma; as a stimulant and promoter of the secretions in the latter stage of low fever accompanied with torpidity; as an emetic, purgative, and diaphoretic in rheumatism; as a diuretic in dropsy, and as an emmenagogue in amenorrhea."

Dr. George D. Wheldon, of Rose Valley, N. Y., in a communication to us, says: "I have been looking for some of your correspondents to call the attention of the profession to the value of senega as an alterative in certain cutaneous diseases. The cases in which I have tested it vary considerably in character. One class is almost peculiar to women at one or two years preceding or following the final cessation of the menses. In these cases a yellowish matter exudes from the hands and forearms which soon degenerates into a thick crust and drops off, leaving the skin beneath nearly sound as at first, but soon becoming fissured is followed by another crop like the first, the disease being prolonged until not unfrequently the nails drop off and are renewed often more than once. Edema of the face is also a common symptom. Another class consists of dry scaly points over the entire trunk and extremities, attended with intolerable itching, which is greatly aggravated by lying in a warm bed. It is with us a frequent sequel of the miasmatic fevers. In these disorders I have tried a variety of constitutional and local treatments with little success until I employed the senega after the following formula:

R. Senega,	- - - - -	2 drams.
Quassia,	- - - - -	1 "
Rhubarb,	- - - - -	1 "
Bi-Carb. Soda,	- - - - -	1½ "
Warm water,	- - - - -	1 pint.

Dose—A teaspoonful three times a day, before meals.

Many of the cases were attended with deranged digestion; but the compound without the senega has no beneficial effect upon the disease of the skin as described. I have used it in a variety of ways, but find the above formula the most satisfactory. In some thirty cases in which I have tested it, it has never failed to effect an immediate cure. We shall give in another number formula for the various preparations of senega.

NOTE.—In this formula the fluid extract of the same articles can be substituted in the same quantities with same quantity of water, or less by lessening the dose.

Hyoscyamus Niger.

(Continued from page 10)

KEEPING in mind the physiological and therapeutical properties of the agent under consideration, which were given in the last number of the Journal, as they have been described by various writers and observers, we proceed to examine some of the definitions of the term *narcotic*, and see to what extent and how definitively it applies in this particular case.

“Narcotics are agents which, in moderate doses, cause a temporary action of the nervous and also of the muscular system, followed, more or less speedily, by a marked diminution, terminating generally in sleep. When the dose is large the excitement is scarcely perceptible, while the diminished power of the nervous system is so manifest that an appearance of coma or apoplexy is induced.” It is evident from this definition that we must be careful to distinguish between stimulants on the one hand, and sedatives on the other; and this distinction is the more necessary, because in nature the narcotic principle is generally combined with one or the other of these, and hence the contradictory statements and unsatisfactory reports of the value of different narcotic remedies by those who do not know why opium suits in one case and hyoscyamus in another: nor must they be confused with the terms hypnotic or soporific and anodyne, the one obtained from the power of producing sleep, and the other from alleviating pain and blunting the sensibility. If these properties are to be included, then these terms are to be held as partial synonyms; if these properties are to be excluded, then these terms are distinct and mark distinct classes.

Dunglison styles the narcotics as "substances which have the property of stupefying" and narcotism, that is, the aggregate effects produced by narcotic agents, as "at times confined to a state of more or less profound stupor, and at others being a true poisoning, characterized by vertigo, nausea, a state of intoxication or apoplexy, constant deliriums, convulsive motions, &c."

Orfila defines narcotism as "beginning with a sense of fullness in the head, then there succeed a sort of intoxication, dizziness, headache, loss of voluntary motion, almost amounting to paralysis, sometimes convulsions, and generally stupor and coma; more gradual than apoplexy, less abrupt than epilepsy."

Dr. Tully is far more minute, precise and definitive than any of these. He says: "Narcotics are articles which, *in the first degree of their operation*, directly allay morbid irritability and irritation, and irritative actions generally, morbid sensibility and sensation, morbid mobility, jactitation and wakefulness, when they are connected with a non-phlogistic or a positively atonic condition of the system; *in the second degree of their operation*, they directly relieve pain; *in the third degree of their operation*, they directly produce more or less somnolency, or even positive sleep; *in the fourth degree of their operation*, they produce vertigo, headache, faintness, dimness of sight, the sensation of a cloud before the eyes, or some imperfection of vision, either with considerable dilatation, or great contraction, or an immovably fixed, but otherwise natural state of the pupils, nausea and retching, with epigastric uneasiness, especially when the head is raised, or otherwise much moved, accompanied with small and irregular pulse, cold extremities, cold, clammy and slippery sweats, delirium, convulsions, either clonic, tonic, or of some other sort, succeeded by coma, and sometimes death; and when the narcotic has no other medicinal power conjoined, without any other accompanying operations." He says farther: "I believe that all narcotics of any material activity, if pushed to a certain extent, are capable of producing convulsions of some sort. Some produce convulsions of the common sort, as hyoscyamus, papaver; others of the epileptic sort. Some produce convulsions as a primary part of their operation, and some only as a secondary part, as hyoscyamus and papaver;" and still again that "hyoscyamus is a pure narcotic, entirely destitute of any true, proper and legitimate stimulating properties."

Being aware now of the precise effects that have been observed of the hyoscyami up to and during the period of narcotism, we can, in view of the facts, decide it to be a simple narcotic, or possessed of narcotic and other properties. All that can be demanded of writers is that they shall affix some definite meaning to the terms they use, and use those terms in strict conformity with these definitions.

Whether it be conceded or not that the hyoscyamus is a simple, pure narcotic, its peculiar properties bring it into a varied use, whether administered alone or as an adjuvant to other medicines.

Asclepias Incarnata.

(*White Indian Hemp.*)

Of the six kinds of asclepias, viz: *Incarnata*, *Syriaca*, *Tuberosa*, *a Curassavica*, *Gigantea*, and *Vincetoxicum*, five of them appear to have been used at different times in the treatment of urinary and genital diseases. Scarcely can a physician be found who professes to have any knowledge of the plant in question. The asclepias incarnata has a smooth, erect, downy stem, branched above, two or three feet high, and furnished with opposite, nearly sessile, oblong-lanceolate, somewhat downy leaves. They are also acute or pointed, obtuse at the base, on short petioles, and slightly tomentose. The flowers are red or reddish purple, sweet-scented, and disposed in numerous crowded erect umbels, mostly terminal, which are generally in opposite pairs. The nectary is entire, with its horn exserted and subulate. The leaves are four to seven inches long, and from one half an inch to an inch and a half wide; umbels are from two to six, on a peduncle two inches long, and consist of from ten to twenty small flowers. There are several varieties of this plant, the *A. Pulchra*, which is more hairy, with broader and shorter petioled leaves; the *A. Glabra*, which is almost glabrous, with two opposite longitudinal hairy lines on the stem, and leaves glabrous, with rough margins, midrib glandular below; and the *A. Alba*, which has white flowers.

This plant grows in damp and wet soils throughout the United States, and bears red flowers from June to August. It emits a milky juice on being wounded. The root is the officinal part, and the medical properties of that reside in the cortex. It varies in

thickness from one to six lines, and is of a light yellowish or brownish color. It imparts its properties to water.

PROPERTIES AND USES.—Its properties are similar to the *A. Syriaca*. It is an anthelmintic, for which purpose the powder may be used in doses of ten to twenty grains, three times a day; or the decoction two to four ounces. Prof. Tully recommends it in catarrh, asthma, syphilis, rheumatism, and worms. Dr. Griffith states that it has been employed by several physicians who speak of it as a useful emetic and cathartic. It has been found not only alterative, diaphoretic, and diuretic, but one of the finest aperients in the *Materia Medica*. Dr. Hauser has used it with the happiest results in many forms of fever, but chiefly as an adjuvant to other medicines. In the treatment of gonorrhea and syphilis there probably is nothing equal to it now known to the medical fraternity. Dr. H. says:—"I have used, for many years, the tincture only, prepared in diluted alcohol, on account of the gum with which the root abounds.

R. <i>Asclepias Incarnata</i> ,	3 iv.
Diluted Alcohol,	Oj.

After about fourteen days maceration, as with most drugs, it is prepared for use. I have generally prescribed it in a tablespoonful dose three times a day; i. e. before breakfast, dinner and supper. And this I have done, with very little regard to the stage of the disease, both in gonorrhea and syphilis, however heterodox and unscientific it may appear to those nice critics in the medical fraternity who can theorize learnedly, but fail in practice.

GONORRHEA.

Case 1st. Was afflicted with "running of the reins brought on by a strain," and it had afflicted him long and sorely, even to the extent of a change from white to greenish discharges. I put him on tr. of *asclep. incarn.* alone; but as his business required him to ride a great deal on horseback, thus keeping up the irritation in the genital region, I think it was two weeks before I succeeded in curing him.

Case 2d. Was of intemperate habits as well as priaputic. A single bottle of 3 vjii cured him.

Case 3d. Was badly off. His business required daily riding on horseback, but the tr. *asclep.* cured him in three days.

SYPHILIS.

B. N. had been looking badly for two or three months, seemingly afraid to call for help. I put him on my favorite tr.—blistered over his mammary glands several times during the course, and had large quantities of mercurial ointment rubbed into them after each removal of the cuticle. After three weeks perseverance I had the happiness to see my patient restored to hope and health."

If physicians will lay aside all indifference, and use the *asclepias incarnata*, especially in gonorrhea and syphilis, I have no doubt that it will soon take rank in their estimation with the very foremost remedies in our *Materia Medica*.

Gelseminum Sempervirens.

(*Yellow Jessamine.*)

In the April and May number of this Journal we gave an extended article upon this plant. Many enquiries have recently been made of us as to the most efficacious article to be used as an antidote for an overdose. We wish our readers would give us their experience upon this point for the benefit of the profession. It has been suggested that the same articles employed for an overdose of *veratrum viride* would be as equally efficacious, viz:—"Morphine or laudanum with brandy is a perfect antidote for an overdose of *veratrum*, or syrup of sulphate of morphine one part, fluid extract of ginger two parts. Dose of this mixture for an adult male, sixty drops every fifteen minutes till relieved."

Dr. Lungren, of Franklin, North Carolina, mentions the use of aromatic spirit of ammonia as an antidote in two cases, as follows:

I have lately had two cases under my own observation showing the effects of an over dose of the extract of yellow jessamine. I am anxious to ascertain the antidote in such cases. I will relate my cases, as they strikingly show the effect on different persons.

Mrs. L., aged 24, suffering from typhoid pneumonia. I had commenced treating her with quinine and *veratrum viride*, beside the usual remedies. Gave her ten drops of *gelseminum* in sweetened water; in an hour gave her eleven drops in water, and at the expiration of two hours gave twelve drops. Shortly after-

wards she said she could not see any one in the room, although I was within two feet of her. Her eyes were wide open, pupils dilated, pulse regular and full, skin natural and healthy in color, feet and hands cold. She seemed to know all that was going on, described her symptoms, said she felt faint, felt as though her blood had ceased circulating, and that her head felt very light. I gave her a teaspoonful of aromatic spirits of ammonia in water, and in fifteen minutes repeated the dose. At the expiration of half an hour she said she felt perfectly well; complained of no pain whatever; fever was subdued, and in four days she was able to rise from her bed, and is now well. This patient took in all thirty-three drops.

Dr. B., a practising physician of one of the upper counties of Georgia called on me; complained of a severe nervous toothache; happened to see my bottle of fluid extract of gelseminum; read the accompanying directions; applied the bottle to his mouth, and took, as he said, about what he thought to be twenty drops. In ten minutes time he said: "I cannot see you." I looked at him; his eyes were wide open; pupil dilated; pulse eighty or ninety. He attempted to walk, and staggered like one intoxicated. I immediately administered a dose of ipecac and went for assistance. On returning found partial paralysis of the glottis, tongue and eyelids. He became very sick, and vomited but little. I gave him pencil and paper, for he could not speak. He wrote: "I am very sick; I wish to vomit but cannot." In a few moments he vomited again, and the discharge passed through the nostrils. His hands and feet became icy cold; pulse regular—eighty or ninety. We applied warm bricks to his feet and chaffed his hands and ankles; placed strong aqua ammonia to his nose and chest. In an hour he was able to speak, and was removed to his father's house. I visited him the next day, when he complained of being very faint and weak. I continued the use of aromatic spirits of ammonia, and next day he was able to ride home, a distance of twenty-three miles. He obtained an ounce bottle of gelseminum for trial. It is needless to say the toothache left him.

Is there any quicker and surer antidote for an overdose of gelseminum than ammonia? If so, please inform me.

Bradycrote Treatment of Yellow Fever by Gelseminum Sempervirens.

BY DRs. WHITE & FORD, CHARLESTON, S. C.

In view of the results obtained from a reduction of the pulse, in the treatment of the fever as observed under the veratrum, and in order to contrast with this drug another remedy possessing similar powers, at the suggestion of Dr. White, we also used in the present epidemic the tincture of gelseminum sempervirens, which was prepared after the following formula: *R.* Rad, gelsem. semp., $\frac{3}{4}$ iv., alcohol (95 per cent.) aq. com., aa $\frac{3}{4}$ viij. *M.* And digest 14 days, then filter. The initial doses of this tincture were, for adults, from 20 to 30 drops—and for children, from 5 to 20 drops, every hour for the first four hours, and as with the veratrum the secondary doses were half as large.

Certain cases which had been seen late, or were characterized by notable irritability of the stomach, as also some which showed no special malignity were treated by this agent with marked advantage; upon whose employment Dr. White decided in consequence of the statements of Dr. Cleveland, of Cincinnati, and of Dr. Mayes, of South Carolina, in this journal, concerning its influence upon the pulse and freedom from irritant properties, &c. From notes taken upon cases thus treated, we have deduced the following numbers:

Total number treated with gelseminum sempervirens, 24; all of which recovered. Of these, 15 were males and 9 females. Adults, 12, and children, 12; whites, 22; and blacks, 2; natives of Charleston, 10; South Carolina, 5; Ireland, 7; Germany, 2.

Mean frequency of Pulse.	ADULT MALES. Beats per Min.	ADULT FEMALES. Beats per. Min.	CHILDREN. Beats pr. Min
When first given . . .	112.4	101.3	122.2
Twelve hours after . .	55.4	54.6	70.9

Of the whole number treated, 2 vomited black vomit, 5 passed black vomit downwards. In 8 cases hæmorrhage occurred from tongue, gums or nasal passages.

One woman was in the sixth month of her pregnancy, and did not abort.

Avera. duration of treatment.	ADULT MALES. Days.	ADULT FEMALES. Days.	CHILDREN. Days.
For	7.2	9.3	8.5

No marked prostration was caused by this remedy. The pulse being, however, much less quickly reduced than by the veratrum. In few cases was the heart's action fully lowered in less than 12 hours, and it was well controlled throughout the rest of the disease in the majority of cases. The concurrent treatment was the same as with the veratrum. Mercurialization was complete in 10 cases; incomplete in 14 cases. In a few instances, a marked redness of the tongue was observed, a condition that was not distinctly noticed during the administration of the veratrum. The gelseminum appeared to produce a general calming influence even during the early period of its administration, but

was not found to possess any marked narcotic properties. It seemed, also, to promote the action of the kidneys, and during its use only, in several cases, an erythema of the skin was noticed. This drug appeared to influence the volume of the pulse before it affected its frequency, and in most cases for the rest of the disease to control both conditions in an equal manner—emesis was not observed to ensue upon the administration of this medicine; the gastric irritability peculiar to the disease being moreover to all appearance favorably influenced.

The total number of cases of yellow fever treated with a slow pulse by the *veratrum viride* and *gelsemium sempervirens*, was conjointly 141, of which 15 died and 124 recovered.

Total number of cases treated by ordinary methods were 6, of which 3 recovered and 3 died. These vomited black vomit and died. One was a pregnant woman in her seventh month, who died without aborting.

In conclusion, we beg leave to remark, that the confidence with which we were inspired by the use of these drugs in the commencement of the epidemic has continued unabated: that we still continue to use them, and intend to do so again, should our city be unfortunately revisited by this obdurate and calamitous disease. With apologies for the length and statistical nature of this communication, we remain, respectfully yours,

[From the New York Medical Journal.]

Simple Tests for some Important Medical Preparations.

BY EDWARD R. SQUIER, M. D.

THERE is no branch of commerce wherein the competition of trade is more rapidly and more certainly tending to deteriorate and debase the quality of manufactured products than that which deals in medicinal substances; and there is none where the interests of the consumer are more remotely considered in manufacturing, or where these interests are so difficult to guard and protect: whilst there is assuredly no branch whose operations and productions are of more vital importance to the community and the profession of medicine.

An important collateral effect of this debasement of medicinal substances, which does not receive due consideration in the profession generally, is that the effects of the uncertainty and bad quality of these substances are transmitted directly to the practice of medicine, and in failing to fulfill the indications to their use they not only bring distrust and discredit upon both the science and art of medicine, but also tend directly to foster and uphold the quackeries and nostrums of the day in many ways. For instance, a physician prescribes the compound cathartic pills of the pharmacopœia: They either act drastically, inadequately, or they do not act at all. The patient says the doctor does not understand his business, and the next time buys "Brandreth's Pills" or some other nostrum, and is better satisfied with the

result. The circumstance that the compound cathartic pills were made of bad and deficient materials, and through competition in trade were unduly active from the addition of some cheap drastic, or inert from consisting mainly of starch and gum, while the extracts from which the nostrum was made had been much more carefully prepared—is quite overlooked by both practitioner and patient to the lasting injury of the interests of both. It is, however, a fact that a large proportion of the compound extract of colocyth sold is manufactured from materials so cheap and so bad that it is rarely quoted in prices current at much above half the price of the crude materials from which it should be made; while the writer has known of several hundred pounds having been made and sold within one year at a price below one-third of that which the good materials directed by the pharmacopoeia would have cost.

Another fertile source of bad and imperfect medicinal substances lies in the use, in manufacturing, of cheap substitutes and by-products, and in utilizing residues for improper purposes, so that, through many ways, the tendency is constantly increasing whereby the science of medicine is subsidized and radically injured by the debasement of the agents upon which the success of the art of medicine so much depends.

The check or remedy for this evil tendency rests entirely and only with the profession, and may be found in various ways, but in no way more easily or more certainly—for such substances as admit of it—than in the application of simple and reliable tests.

The writer having for some years past been engaged in manufacturing preparations of known character, for the navy, by the United States official standard, has had the opportunity of observing their properties pretty closely, and has collated and originated a few simple and easy tests of quality which it is the object of this paper to communicate to the profession. These tests require little time, skill, or apparatus, and are adapted to the extemporaneous use of the physician or apothecary, so that they may be conveniently applied at the dispensary counter or at the office table. They consequently do not aim at critical accuracy, but at the more important point of practical discrimination.

A very important general indication of quality in medicinal substances is the source from whence they come, and the channels through which they may have passed. The profession should obtain a better and more critical knowledge of the various manufactures, that due weight might be given to the names associated with the preparations they use, and should then be more careful to observe that the authenticated label of the manufacturer is affixed. In the common desire to be considered manufacturers, and from the indisposition to circulate or publish others' cards or names in connection with preparations sold, it is becoming quite rare to find the name of the real manufacturer upon the packages of medicinal preparations. They are commonly sold without evidence of their source, and therefore without any real responsibility upon any one. The traditional or reputed character with which they

commonly pass through the various hands to the profession is too often without other foundation than the disposition to buy cheaply and sell at a large profit. From the circumstances that few apothecaries manufacture even their more simple preparations, and that there can be no proper responsibility in a verbal character transmitted through several persons, the professions both of medicine and pharmacy should be more careful that their packages are duly authenticated from the desired sources, as general tests or evidences of quality. A very large proportion of medicinal substances must depend mainly upon some such evidences of quality until their therapeutic value is determined in practice, since they are beyond the easy reach of chemistry, and since sensible properties are so often deceptive. Among those which are susceptible of easy practical discrimination by simple means the writer is at present able to offer the following:—

ETHER.—A strip of unsized paper, or a clean glass rod, dipped into the ether and allowed to dry for a moment or two, will by the odor it gives afford evidence of the less volatile impurities that it commonly contains. There usually remains a somewhat aromatic, slightly pungent odor, that is not hurtful in the more dilute ether used for common medicinal purposes, but the disagreeable oily odor often found is more objectionable, whilst really good ether should leave no odor whatever. The ether used for inhalation should leave upon the sponge, paper, or rod, no odor at all.

The strength of ether is less easily ascertained except by a specific gravity instrument. With a little practice, however, with some good specimen for comparison, a very satisfactory estimate may be found by observing the slowness or rapidity with which any given specimen evaporates from the palm of the hand. Ether for inhalation should give off bubbles rapidly at the temperature of the palm of the hand. A thin test tube containing the specimen should be grasped firmly for a minute or two, and then the ether should be stirred at the time of observation. The bubbles arise from the points of contact between the tube and stirrer.

COMPOUND SYRUP OF ETHER.—**HOFFMAN'S ANODYNE.**—Two drops of official spirit stirred into a pint of water give to the mixture a distinct oily surface, and the peculiar fruity, aromatic odor of the heavy oil of wine, free from the odor of ether and alcohol. Sixty drops in the pint renders the water decidedly turbid; while, with four fluid drachms to the pint, a scanty precipitate of minute oil globules occurs after a few minutes' standing. The fruity, apple-like odor is characteristic of the chief anodyne ingredient, the oil of wine, and is entirely wanting in the ordinary commercial article. Without the oil of wine the preparation is a stimulant antispasmodic. With the oil it is a highly valuable anodyne antispasmodic, particularly adapted to nervous irritation and hysteria. The liquid universally sold as Hoffman's Anodyne is a residue of the earth-making process, containing varying proportions of ether and alcohol with a little etherole or light oil of wine, but in no single instance of the many examinations made by the writer has any true heavy

oil of wine been found in it. Heavy oil of wine, from being expensive and somewhat difficult to make, has finally been entirely omitted from the preparation, and is now hardly to be met with in commerce; while, as a consequence, the preparation to which it belongs, from a failure to meet the proper indications to its use, is become a stimulant, and slowly going out of use.

(*To be continued.*)

Syllabus of a Course of Study, intended as an Aid to Students of Pharmacy.

BY WILLIAM PROCTER, JR.

INTRODUCTION.—When a lad, or young man, has made up his mind to enter upon the business of a pharmacist or a druggist, he should be fully aware of the responsible offices it involves, and of the two-fold nature of the functions it requires to be performed, viz: those of a mechanical nature acquired by manual practice, and those of a scientific character, to be learned only by study in connection with that practice.

The phenomena which occur in the daily routine of the apprentice, though matter for wonder at the beginning, become familiar by repetition, cease to excite thought or inquiry, and he rests satisfied in ignorance of their nature. But when, during his practical lessons, a course of study is pointed out to him, he soon gets a key to much that was hidden, becomes interested in what he is doing, and progresses rapidly in proportion.

It often happens that the beginner does not enjoy the privilege of a friend at his side, to explain difficulties as they arise, and employers are sometimes as ignorant in these regards as the apprentice himself. It is to point out to these seekers after knowledge the route to obtain it, that this Syllabus has been prepared.

The sciences which are chiefly involved in the studies of the young apothecary, are botany, chemistry, and physics. The Dispensary is a treatise on drugs and medicines, viewed in relation to their origin, botanical, zoological or mineralogical, their mode of collection, preparation and introduction into commerce, their commercial history, their sensible properties and chemical characteristics, their medical properties and pharmaceutical preparations and uses. The Dispensary, therefore, contains the various knowledge required by the pharmaceutical student. But extensive as such works usually are, there are many details necessarily omitted, and much collateral information not comprehended, which, to the student, is requisite to fully understand the scientific part of that work.

In the shop, the beginner soon finds that the productions of almost every country are collected around him, and a laudable curiosity should lead him to inquire into their history, as well from a just desire to be able to explain it to others, as to enable him to convert them into preparations, with a full understanding of their several qualities and uses.

At the outset, therefore, the earnest pharmaceutical student should possess,

or have access to, elementary works on chemistry, botany, and natural philosophy (unless his previous education should have included these branches), because they will be needed to understand the language of the Dispensatory.

Botany.—Almost any elementary work on botany will serve the beginner, in reference to the terms used in the Dispensatory, but Dr. Gray's "First lessons in Botany and Vegetable Physiology," which contains a copious dictionary of botanical terms, is to be preferred, as it was written as an introduction to the author's Manual of Botany, which is appropriate for the more advanced student. However slightly the beginner may acquaint himself with the principles of botany at first, he should aim at its systematic study during his term of service, as well for its intrinsic interest and usefulness, as for its appropriateness to the accomplished pharmacist. Indeed, the pleasure derivable from the pursuit of botany is sufficient stimulus to many persons, independent of its usefulness; and its tendency is to induce excursions into the country, which are grateful as a relief from the confined atmosphere of the shop.

Chemistry.—Of chemistry it may be said that it is the foundation of all correct pharmaceutical knowledge; it is the key which unlocked those mysteries, which, during many centuries, were hidden in the language of the alchemists and philosophers of the middle ages—a language, the obscurity of which no doubt arose as much from ignorance of the real nature of the reactions they professed to describe, as from a disposition to give undue importance to the possession of the secrets.

The student, therefore, if he has had no preliminary instruction in chemistry, should be provided with a chemical dictionary, or glossary, and an elementary work on that science, so as to be able to enter a course of reading without waiting until he can obtain instruction by lectures or otherwise. It is not to be expected that the beginner can correctly understand *all* the terms used, even by aid of a dictionary, but very many he can thus master, and by study and experiment the most may be understood. It is better for him to progress slowly and *really*, than rapidly but superficially, and hence each difficulty should be wrestled with till cleared up, or set aside among "work for future effort," that it may be returned to with renewed vigor.

Mineralogy and Zoology are far less important to the pharmacist than chemistry and botany, and may be left to a later period, and then only entered on so far as to get a proper idea of their classification and arrangement, and of the species chiefly contributing to medicine, unless desired by the student.

Every pharmaceutical student should, at the outset, endeavor to form a *plan of study*. This plan will vary with the mental characteristics and kind of opportunity afforded to each. While one will have ample time and at stated periods; another will need to employ the brief and irregular intervals, which almost constant engagement in the shop and laboratory permits; but as, in either case, a plan regularly adhered to will greatly aid progress, it is recommended that each student should adopt the best one of which his circumstances admit.

This Syllabus will give a bird's-eye-view of what is to be studied, and the order in which it may be advantageously considered; yet it may be well to bear in mind that whatever facilities it may present, it is only an aid or scaffolding to get at the results of study, and not the thing itself, and when the sagacity of the student can adopt a better arrangement, he is free to do it. Where one student thus carves out his own pathway to the temple of knowledge, twenty will take the beaten track of others, and many more lack the energy and perseverance to keep on this well marked route. If any of the latter class should fancy that this Syllabus is a substitute for that exertion which the acquisition of knowledge requires, they will be greatly disappointed.

In thus speaking of the pharmaceutical student, as he *should be*, it must not be supposed that it arises from a false idea of what he *is*. It is indeed true that study, properly so called, is often times the last thing the *young* apprentice thinks of. Kept on the go from morning till night, and sometimes all the evening in addition, when cessation of physical labor occurs he is naturally more disposed to court Somnus than the Muses, or more inclined to the newspaper than the Dispensatory. This disinclination for study often arises from not possessing a friend to point out where to begin and what to read. If employers would take more interest in their boys at first as regards their reading, endeavoring to get them interested in subjects pertaining to their business, the latter would be much more likely to get their ambition excited to exertion. The value of a drug clerk in some positions is greatly enhanced by the possession of a kind of knowledge, the result of experience and reading, which enables him to take the place of his employer, in coping with the emergencies of business. Now, it is true that there are certain difficulties which recur so seldom that but one or two may happen during an apprenticeship; and if not learned then, no other opportunity may offer, until the apprentice, having become the clerk, finds himself compelled to act, or acknowledge his ignorance. It is therefore necessary for the apprentice, who desires to become a *master* in pharmacy, to be wide awake to every incident of the counter, gaining information daily by what he sees and hears and handles, and never hesitating to ask where he is in doubt, under the idea that it will be showing ignorance. It is for want of this kind of training and earnestness, that so many drug clerks are found illy qualified to take charge of a store; they are not equal to the numerous occasions where discretion and judgment are required; and after going from one employer to another, either abandon the business in disgust, or settle down into a second rate position as confirmed underlings.

It is to enable apprentices and others to avoid this humiliating result, and to stimulate them to honorable exertions in the pursuit of pharmaceutical knowledge, that the Association offers this Syllabus for their acceptance, believing that it will point out a practicable road to respectability, if not to eminence, in their profession.

Ipecacuanha in Delirium Tremens.

Dr. Paoli, physician to the Bridewell city prison, in an article published in the Chicago Journal, speaks very favorably of the above named remedy in delirium tremens, as it presented itself in the prison under his care. He says: "Ipecacuanha, which I have tried in sixty cases, I found most remarkably successful, quieting the nervous system, exciting the appetite, acting on the secretions, and uniformly producing sleep. When a case is not of too long standing, I give it as an emetic the first dose, and afterwards I give from fifteen to eighteen grains every other hour. Connected with this remedy, I use shower baths, and let the patient frequently drink strong beef tea, without any alcoholic stimulants." This is an old method of treating mania-a-potu. But delirium tremens, or what is so denominated, is a disease presenting such different pathological conditions, that no one remedy can be relied on to meet the indications in all cases.

Editorial.

PROCEEDINGS OF THE AMERICAN PHARMACEUTICAL CONVENTION.—The volume before us contains five hundred octavo pages—is full of interesting matter, and reflects much credit upon the association, as does the style and arrangement upon the executive committee.

This association was organized in Philadelphia, in September, 1853, for the advancement of pharmaceutical knowledge and the elevation of druggists and apothecaries as a profession. The seventh annual session was convened at the Smithsonian Institute at Washington, September 14, 1858. The convention was called to order by its president, Charles Ellis, of Philadelphia. After the appointment of the various committees incident to its organization, and the reports of the committees of last year, which will be noticed in another place, the president read his annual address, which is a detailed history of the foundation of the association—the causes and motives that induced its first organization, with a review of the proceedings for the past six years, with many valuable practical suggestions.

John L. Kidwell, of Georgetown, was elected president, and E. R. Squibb, of New York, James O'Gallagher, of St. Louis, and Robert Battey, of Rome, Georgia, vice presidents. D. J. Browne, Esq., of the Patent Office, was present by invitation, and made some interesting remarks concerning the efforts of the Patent Office in introducing foreign plants into this country, as the olive, fig, prune, cork tree, verbena, opium poppy, Zante currant, raisin grape, liquorice, &c. The cork oak (*Quercus suber*) has been successfully cultivated as far north as College Hill, near Cincinnati. He states that our importation of cork and corks, in 1857, exceeded \$250,000, and which is constantly increasing. This demand should be met by domestic production. Among other objects of investigation by the Patent Office, may be mentioned

the analysis of various trees and plants, and of the soils in which they grow, embracing cotton, tobacco, common potato, Chinese yam, Sorghum cane and Indian corn; also a new principle, or red coloring matter, highly astringent, has been discovered in the hemlock bark (*Abies Canadensis*); and a substance analogous to lupulin in the samara of the wafer bush (*Ptelia trifoliata*), which has been successfully employed as a substitute for hops.

The most interesting part of the proceedings are the reports of the committees.

The report upon home adulteration of drugs we published in the December number of this Journal.

WEIGHTS AND MEASURES.—The committee on weights and measures, by Dr. Guthrie, favors the adoption of the decimal system, while the supplementary report, by John Meakim, of New York, dissents from the scale proposed by the New York Chamber of Commerce, and urges the adoption of the *French* decimal system with some modifications, extracts from which we shall publish. It is quite time some new standard was decided upon, and that we were rid of the present conflicting systems.

REVISION OF THE PHARMACOPOEIA.—The report of the committee on the preliminary revision of the Pharmacopœia occupies forty-four pages, and is replete with valuable suggestions and additions. It is no light undertaking to alter and revise this work. The committee have collected a large amount of matter which, if not wholly available to the pharmacopœia convention or its committee, will be valuable to the apothecary and medical profession at large. That part devoted to Fluid Extracts by Mr. Stearns is quite elaborate. Many decoctions and tinctures will probably be represented in the revised edition by Fluid Extracts, as being more convenient and better representing the medicinal properties of the article.

AMENDMENTS TO THE DRUG LAW.—The committee on amendments to the drug law recommend that the appointment of examiners of drugs in the important ports be made by the President and Senate, and that the applicant have the confidence of either the college of pharmacy of the port or a recommendation of the medical association, and that each of the important offices be supplied with all the necessary apparatus and means of *testing and trying* all drugs to ascertain their purity—that the salary or pay of the examiners be such as to command the services of competent, educated, and honest men; also that the examiners be appraisers of value.

UN-OFFICIAL FORMULÆ.—The report on local un-official formulæ is from W. B. Chapman, of Cincinnati, and by practitioners of medicine in that city. We publish part in this number.

ROBERT M. BATTEY ON ARROWROOT.—This reply is full of interesting matter touching its cultivation, and illustrates the mode of preparation, with the conclusion that an article equal to the best Bermuda arrowroot may be made on the sea board of Georgia; and the only reason why it is not had from that source he is unable to answer, except that its manufacture is not well suited to the genius of our people, taken as a mass.

REPORT ON THE PROGRESS OF PHARMACY.—This report is divided under the following heads or divisions: Inorganic chemistry, organic chemistry, practical pharmacy, materia medica, toxicology, education, pharmaceutic associations, legislation on the subject of the sale of poisons, and literature. It occupies forty-six pages—is a review in detail of the progress made during the year in the several departments or divisions. Under the head of literature is a list of books and periodicals issued during the year, bearing directly or indirectly upon matters relating to pharmacy in English, French or German languages.

THE SYLLABUS OF A COURSE OF STUDY, intended as an aid to students of pharmacy, being a special report by Prof. Procter, and occupies sixty-six pages. We publish the introduction on page forty-nine, and shall publish further extracts as our space will allow.

NOTES AND SUGGESTIONS upon some of the processes of the United States pharmacopœia, especially directed to the committee of revision, by Dr. Edward R. Squibb. This paper is one of the most important and practically useful contributions submitted to the association. Dr. S. was for many years connected with the United States naval laboratory at Brooklyn, and all his papers indicate a man of close observation, study and science. Our readers will find on page forty-six of this Journal an extract from his paper upon "simple tests for some important medicinal preparations."

SUBJECTS FOR INVESTIGATION.—The committee report over forty different subjects accepted by members of the association for investigation to be reported at the next meeting of the association.

We have briefly noticed the various important reports, and shall in our next number notice the several "Essays."

Those wishing to obtain the report can do so by communicating with S. S. Garrigues, 108 North Front Street, Philadelphia. The price of the volume in paper, with postage, is \$1.00, in board, \$1.25, and is worth to every medical practitioner and apothecary many times its cost.

We call the attention of those in want of pure wines and liquors for medicinal purposes to the advertisement of Messrs. Bininger & De Witt. This is an old established house, who have always sustained a reputation of dealing in articles of the first quality, and not in the poisonous adulterated stuff which floods the country. The value of pure liquors for medicinal purposes is fully appreciated by those who have been imposed upon by purchasing a worthless article.

SURGICAL INSTRUMENTS.—Physicians in want of Surgical Instruments, or any articles enumerated in the advertisement of V. W. Brinkerhoff, will be certain of getting them of superior quality and workmanship.

Correspondents will oblige by writing plainly their names, town, county and state. We have, in several instances, been unable to answer letters because these are omitted.

BOOK OF FORMULÆ.—Eight pages of this work will be appended to each number of the Journal hereafter.

Subscribers will please notify us if they do not receive the Journal regularly.

Various Formulæ for the Gelatinization of Cod-liver Oil.

M. STANISLAS MARTIN'S JELLY MODIFIED.

R. Cod-liver oil.....	℥ ij.
Fresh spermaceti.....	℥ ijss.
Simple syrup.....	℥ vj.
Jamaica rum.....	℥ vj.

Beat the ingredients together with the aid of heat, and when the mixture has acquired some consistence, pour it into a wide-mouthed bottle.

COD-LIVER OIL SOLIDIFIED WITH GELATINE.

R. Pure gelatine.....	℥ ss.
Water.....	℥ iv.
Simple syrup.....	℥ iv.
Cod-liver oil.....	℥ viij.
Aromatic essence.....	q. s.

Dissolve the gelatine in the boiling water, and add successively the syrup, the oil, and the aromatic essence; place the vessel containing the entire in a bath of cold water; whip the jelly for five minutes at most, and then pour it, while still fluid, into a wide-mouthed glass bottle, furnished with a cork, or with a pewter cap, or if a bottle be not at hand, into a porcelain or earthenware pot, which should be carefully closed.

COD-LIVER OIL GELATINIZED WITH CARRAGEEN OR IRISH MOSS.

R. Fucus crispus.....	℥ ss.
Water.....	℥ xvij.
Simple syrup.....	℥ viij.
Cod-liver oil.....	℥ viij.
Aromatic.....	q. v.

Boil the carrageen in the water for twenty minutes; pass the decoction through flannel; concentrate it until it is reduced to four ounces by weight; add the syrup, the oil, and the aromatic; whip the mixture briskly, having first placed it in a cold bath, and pour it, while still a little warm, into the vessel intended to receive it. The syrup may be replaced by an equal quantity of Garus' elixir, mint or vanilla cream or rum, &c.

M. Sauvan proposes to combine cod-liver oil with Iceland moss.

LICHEN AND COD-LIVER OIL.

R. Iceland moss jelly.....	℥ iv.
Gelatine.....	℥ iv.
Hydrocyanated cod-liver oil (to which two drops of essence of bitter almonds have been added).....	℥ vj.

Prepare the Iceland moss jelly in the usual manner; melt the gelatine and pass it into the vessel which is to hold it; then add the cod-liver oil; stir the entire with a spatula, until the mixture be homogeneous and the jelly begins to congeal. Dose—two or three spoonfuls daily.—*Bull. Gen. de Thérap.*—*Dublin Hospital Gazette*, Aug. 15, 1857, p. 254.

AMMONIO-FERRIC ALUM.

Professor William Procter, Jr., in the March number (1858) of the *American Journal of Pharmacy* says:—"In the *American Journal of Pharmacy* for 1856, pages 305 and 478, I made some remarks, introducing to notice the *Ammonio-ferric Alum*, or sulphate of ammonia and of sesquioxide of iron with a formula for its preparation. This combination having been since found by many physicians to answer the description given by Dr. W. Tyler Smith, of its advantages as an astringent tonic, the demand for it has occasioned the necessity for repeatedly preparing it; and, profiting by the suggestions of some of my friends, I have improved the process for its preparation, so as to make it much more readily, perfectly and economically, thus:—

R. Ferri sulphatis cryst.	℥ xxiv.
Ammonise sulphatis.	℥ xiss.
Acidi sulphurici.	f. ℥ v. f. 3 v.
Acidi nitrici.	f. ℥ iij. vel. q. s.
Aquæ.	q. s.

Mix f. 3 xxj. of the sulphuric acid, in a *large* mortar, with the sulphate of iron coarsely powdered; then gradually add, with trituration, the nitric acid, till it ceases to produce effervescence. Transfer the mixture to a porcelain capsule, and boil it with one quart of water, added in two or three portions successively. Then add the remaining f. ℥ iij. of sulphuric acid, and the sulphate of ammonia; boil till the latter is entirely dissolved, and set aside in a cool place to crystallize. If the resulting crystals are not sufficiently pure and violet-colored, they must be re-dissolved by boiling in about a pint of water, acidulated with an ounce or two of sulphuric acid, filtered or decanted, and again set aside to crystallize. The crystals must then be drained, and dried in bibulous paper, before being bottled up. In this way we obtain very handsome, somewhat amethystine crystals.

PREPARATION OF ANTI-ASTHMATIC CIGARETTES.

By M. Dannecy, Pharmacien of Bordeaux.

Some of the properties of stramonium and belladonna—which plants, when smoked, justly enjoy the reputation of relieving asthma, and which are employed with the most undoubted success in the treatment of neuralgia—exist also in plants abounding in nitrates. Thus I have seen patients who had experienced great relief from the use of the leaves of borage and pellitory plants containing, as is well known, much nitrate of lime.

The fault which almost all patients find with narcotic plants, smoked in pipes or in the form of cigarettes, is a copious production of smoke, which fatigues them, and sometimes excites cough—a symptom they are, on the contrary, employed to allay.

In order to obviate this inconvenience, I have added nitre to the leaves of belladonna and of stramonium, by watering these plants, dried and conveniently spread out, with a solution of nitrate of potash, in the proportion of three ounces of the salt to rather more than two pounds avoirdupois of the plants.

It will be easily understood, that as this solution penetrates the entire vegetable tissue, the latter will, when dry, burn completely, without the formation of the pyrogeous products above alluded to.

I have for many years prepared cigarettes according to this formula, and the benefit derived from their use by a great number of patients induces me to publish it, and to call the attention of practitioners to this mode of treatment, consisting in the smoking of narcotic plants combined with nitre.

ELIXIR CINCHONÆ, OR ELIXIR OF CALISAYA BARK.

By Alfred B. Taylor.

R. Best calisaya bark.....	℥ iv.
Fresh orange peel.....	℥ ij.
Ceylon cinnamon.....	
Coriander seed, āā. ,.....	℥ j.
Anise seed.....	
Caraway seed.....	
Cardamon seed.....	
Cochineal, āā.....	℥ ij.
Brandy.....	Oiiss.

Having bruised the articles well, and allowed them to macerate for twenty-four hours in sufficient of the brandy to moisten thoroughly, transfer to a displacement apparatus, and add the rest of the brandy; then displace carefully with a mixture of three parts of water and one part of alcohol, until six and a half pints of tincture are obtained; to this add two and one-half pints of simple syrup, and mix thoroughly.—*Amer. Jour. of Pharmacy.*

IODATE OF POTASH.

Messrs. Demarquay and Custin consider that the action of this salt is more powerful than that of the chlorate of the same base, and that it has yielded excellent results where the chlorate of potash had failed. The dose varies from five to twenty-two grains, and it has been used in diphtheritis, mercurial and gangrenous stomatitis, &c. From M. Millon's directions, the salt may be obtained as follows:—One part of iodine and one of chlorate of potash are brought in contact with six parts of boiling water, acidulated with a few drops of nitric acid. When chlorine ceases to be given off, a concentrated solution of chloride of barium is added to the liquor. The washed iodate of barytes is then decomposed by sulphuric acid, the sulphate of barytes is separated by filtration, and the fluid is slowly evaporated. The crystals of iodic acid are then washed with distilled water, redissolved in boiling distilled water, and the solution saturated with bi-carbonate of potash. A great portion of the salt is deposited in little crystals on cooling.—*London Pharmaceutical Jour.*

VINEGAR LOTION.

This lotion is almost exclusively employed to remove lime from the eye. Its strength is half a drachm of distilled vinegar to an ounce of water. Of course the sooner it is resorted to after the accident the better. It should also be very freely used, the lids being everted, and well washed.

[From the Proceedings of the American Pharmaceutical Association.]

CINCINNATI, August 26th, 1858.

To the Chairman of Committee:—

In compliance with the duty devolving on me as one of the above committee, I send you a few formulæ which are much used in our city, both by practitioners of medicine and the public; with a view of obtaining a greater uniformity in their preparation I forward them to you. If you should think them worthy, please present them to the Association.

Yours Respectfully,

W. B. CHAPMAN.

EBERLE'S PURGATIVE PILLS.

(Richard Eberle, M. D.)

Extract Colocynth Compound.....	One Dram.
Pulverized Scammony.....	" "
Sub. Mur. Hydr.,.....	" "

Mix, and make into five grain pills.

TINCTURE OF WATER PEPPER.

(Prof. John Eberle.)

Water Pepper.....	Eight Ounces.
Diluted Alcohol.....	Ten Gallons.

Macerate fourteen days and express.

DR. ATLEE'S NIPPLE WASH.

(Dr. Edwin A. Atlee.)

Pulverized Gum Arabic.....	Half Dram.
Biborate of Soda.....	Ten Grains.
Tincture of Myrrh.....	One Dram.

WHOOPIING COUGH SYRUP.

(Dr. E. A. Atlee.)

For a child from six months to

		1 year,		Hydrocyanic Acid, One Drop; Simple Syrup, One Ounce.			
From	1	"	to	2	"	"	"
"	2	"	4	"	"	Two	"
"	4	"	8	"	"	Three	"
"	8	"	12	"	"	Four	"
"	12	"	15	"	"	Six	"
"	15	"	25	"	"	Seven	"
"	15	"	25	"	"	Eight	"

SIG.—"A teaspoonful two or three times a day. If there is much oppression give a dose of Antimonial Wine before taking the syrup; and if costive, give a dose of Calomel and Rhubarb."

This prescription is so designed that a teaspoonful shall be a dose in each case.

COMPOUND SYRUP OF MORPHIA.

(Jackson's Cough Syrup.)

Syrup of Morphia.....	Three Ounces.
“ Ipecac and Senega.....	One Ounce.
“ Rhubarb, simple.....	“ “

Mix.

Sig.—A teaspoonful three times daily.

Receipts for the Syrup Morphia and Ipecac and Senega used in the above preparation :—

SYRUP OF MORPHIA.

Muriate of Morphia.....	One Grain.
Simple Syrup.....	One Ounce.
Oil of Sassafras.....	Two Drops.

Mix.

SYRUP IPECAC AND SENEGA.

Polygala Senega Root.....	Two Ounces.
Pulverized Ipecac.....	One Dram.
Water.....	Half Gallon.

Boil the Senega root in the water until half consumed ; strain, then add the Ipecac., and sugar enough to form a syrup.

COMPOUND ARNICA LINIMENT.

(Huxley's Liniment.)

Tincture of Arnica.....	Four-and-a-half Ounces.
Oil of Camphor.....	Half Ounce.
Tincture of Opium.....	One Ounce.

Mix.

BAKER'S COUGH DROPS.

Tincture of Hyoscyamus.....	Four Ounces.
“ Digitalis.....	Two Ounces.
Syrup of Squill.....	Eight Ounces.
Syrup of Balsam of Tolu.....	Two Ounces.

Mix.

Dose—One teaspoonful on going to bed.

PIL. COLCYNTH. MAG.

(Presented by A. P. SHARP, of Baltimore.)

Ext. Colocynth Comp.....	One Dram.
Hyd. Proto-chlor.....	Twelve Grains.
Tart. Antim. and Pot.....	Two Grains.

Make into twelve pills.

Fluid, Solid and Pilular Extracts, Alkaloids and Resinoids.

Every plant in the *materia medica* possesses some specific or general medicinal principle upon which its value, as a therapeutic agent, depends. The various forms in which medicines are prepared give evidence of difference of opinion in regard to the most appropriate and effective mode of administering them, and no one class of pharmaceutical preparations can be used exclusively in medical practice to the rejection of all others. Their remedial properties are due to some one or more active principles. The preservation and presentation of these, in an unaltered state, in all preparations, should be the aim and purpose of the manipulator. The processes by which they are obtained, preserved and made available to fulfil the conditions of their administration, are important points of consideration to the medical practitioner.

The substance or crude material should in all cases be analyzed, and its relation to a standard quality ascertained, because it is a well ascertained fact that plants grown in different localities, upon moist or dry soils, lowlands or uplands, or collected early or late in the season, vary in their proximate principles.

To overcome these contingencies as far as possible, we cultivate extensively the most important plants. By the analysis of a particular article, and the soil upon which it is proposed to grow it, the nutriment necessary to its perfect development is determined. Principal among these are the narcotics, as hyoscyamus, belladonna, stramonium, digitalis, &c. All these are limited to a certain state or condition of growth for manufacturing purposes, and are used in the recent state. As many of the principles of plants are of a volatile and delicate nature, readily injured by heat, causing a conversion of fixed soluble principles into insoluble and inert compounds, we early adopted the process of evaporation at a low temperature in receivers from which the air is exhausted by an air pump.

SOLID OR PILULAR EXTRACTS should represent all the active medicinal principles of the plant from whence they are derived. These may be an alkaloid, resinoid, acid, volatile or fixed oil, oleo-resin, or a neutral principle, (without acid or alkaline reaction), separate or combined, and should be preserved in their natural relations, so that the therapeutical effect shall be the same as the crude material. By an accurate analysis of the plant, the menstruum and manipulation can be adapted to the peculiar characteristics of its active constituents, and their preservation by evaporation in a vacuum rendered more certain than by any other known process. They may be of the pilular consistence, or by further drying, brought to a powdered state, and in that form present all the active *medicinal or positive medical* constituents of the plant in a very concentrated form.

Inferior or sophisticated preparations consist chiefly in the employment of crude materials rejected as unfit for any other purpose, either old or worm-eaten—the admixture of gum and starch to give the required consistence, or keep up the general average of production, or as one of many instances, the use of cichorium intybus for leontodon taraxacum, or solanum nigrum for atropa belladonna.

FLUID EXTRACTS vary from the preceding class in degree of concentration. The general principles observed in their preparation are the same, but the process by which the medicinal properties of the plant are exhibited in the fluid form, admits of the preparation being made of any required standard of strength, definite and uniform as regards the amount of active medicinal principles represented by any given quantity, held in solution so as to form clear preparations. Conceding *fluid extracts* to be made from materials of *standard quality*, and by processes calculated to exhibit the activity of the plant, they meet the requirements of the practitioner by supplying a strength of preparation intermediate between the solid extract and the tincture—avoid the unnecessary bulk of infusions—the uncertainty of decoctions—the stimulation modifying the therapeutical action of many tinctures—are with great facility taken into the system, requiring little or no digestion—act as soon as administered, and when immediate effect of medicine is desired, are the best forms in which it can be employed. The physician is enabled to regulate the dose with greater ease and certainty, and for convenience in calculating doses, they are generally made of the strength of one pound of the drug to one pint of fluid—are capable of ready combination, or of conversion into tinctures, syrups, and infusions, for purposes of further combination.

ALKALOIDS AND RESINOIDS.—They purport to be the active principles of the plants, and have the same relation to the plants whence they are derived, that quinia does to the cinchonas, and morphia to opium. The alkaloids possess all and the same properties with the mineral alkalies; they crystallize, turn red litmus-paper blue, and combining with acids form perfectly defined salts. The discovery of these principles, ordinarily designated resinoids, is more recent, and only up to a certain point do they possess the peculiar characteristics of *resins*. Jalapine forms an exception. Many of these agents, styled indifferently alkaloids or resinoids, do not present any marked acid or alkaline characteristics, such as *piperine*, *asparagine*, *glycyrrhizine*, &c. These substances are more numerous than the resins, properly so called.

It is often necessary when these principles have been reduced, to combine with them sugar of milk or the powder of the same drug, to secure an impalpable powder, because they are often oleaginous in their character. This fact, when it occurs, is distinctly stated upon the bottle, and the quantity always increased in proportion to the admixture, that each bottle shall contain one ounce of the active principle.

These agents are subject to much adulteration, but the tests are simple and easy. *Concentrated preparations proper*, or *alkaloids* and *resinoids*, should be carefully distinguished from the *alcoholic and hydro-alcoholic extracts dried and powdered*, of which large quantities are being made and sold for them. However convenient and valuable they may be, *as a class*, they are preparations which should be sold at only a small advance from the cost of the solid extracts; and it is due to the physician that he understands definitely, whether he is administering the medicinal principles of a drug in an isolated form, or in the form of a powdered solid extract—at the same time he should not be charged the price of the former when dispensing the latter.

EDWARD PARRISH,
No. 800 Arch Street, Philadelphia.

(Author of the "Introduction to Practical Pharmacy.")

PHARMACEUTIST, CHEMIST,

AND IMPORTER OF

FINE DRUGS & PREPARATIONS,

Offers to Physicians a general assortment of Medicines and Medicinal Wares, of which the following are specially recommended:—

Compound Syrup of the Phosphates of Lime, Iron, Soda and Potassa.

("Chemical Food.")

This admirable tonic is adapted to supply the waste occurring during the progress of chronic diseases, and to build up the strength wasted by long continued ill health. Put up in 1 lb. bottles, at \$5 per doz., and in a smaller size, at \$3.50 per dozen.

Glycerole of the Hypophosphites,

Used in the treatment of Pulmonary Consumption, and as a tonic in cases of nervous and general debility. Sold with circulars giving its composition, uses, &c., at \$5 per dozen bottles.

SYRUP OF THE HYPOPHOSPHITES,

Similar to the foregoing, though without the use of Glycerin in its preparation. Price \$6 per doz.

IRON LOZENGES.

Each containing 5 grains of Sub. Carb. Iron, flavored with Vanilla, in boxes, at 1.75 per dozen.

PHOSPHATIC LOZENGES,

containing the Ingredients of the "Chemical Food," in solid form. \$1.75 per dozen.

PHOSPHATE OF ZINC,

A new remedy in Epilepsy and other nervous diseases. Dose 2 to 5 grains.

CITRATE OF IRON AND STRYCHNIA. Dose, 3 grains.

WISTAR'S COUGH LOZENGES.

An old and very celebrated Philadelphia preparation. Price 75 c. per dozen.

JACKSON'S COUGH LOZENGES, \$1.75 per dozen.

RESPIRATORS, for persons with weak lungs or throat, as a filter to the air, and a preventive against cold on leaving heated rooms, and for use in foggy and damp weather. Prices—of Cork, \$1; Silver Wire, \$1.50; Gilt, \$2 each.

PRESSARIES, elastic ring shaped, S. S. and horse-shoe, GUTTA PERCHA, constructed on the most approved principles, and so as to be worn for months without becoming offensive or losing their perfect surface.

Physician's Prescription Scales,

Of the best quality and accurate. We import several kinds from \$1 to \$3.50 each.

Pocket Cases for Medicines,

Containing 17 bottles, of 8 sizes, well corked, and 1 graduated glass, the whole of convenient size, and accompanied by a sheet of 48 labels, printed in bronze on steel blue paper, and ready gummed for use. Price \$2 each. Sold and sent to any part of the country, as above.

RECOMMENDED BY THE MEDICAL FACULTY.

TARRANT'S PREPARATIONS.

The attention of the Medical Profession, and the public is invited to the following preparations:

Tarrant's Effervescent Seltzer Aperient,

Prepared on an entirely new principle, from a late analysis of the celebrated SELTZER SPRING in Germany, combining efficacy, economy and portability, with such additions and improvements as will be found materially to increase its efficacy. This much-esteemed and highly valuable preparation will not fail to effectually remove Dyspepsia, or Indigestion, Bilious Affections, Headache, Heartburn, Acidity of the Stomach, Costiveness, Gout, Rheumatism, Loss of Appetite, Gravel, Nervous Debility, Nausea, or Vomiting, Affections of the Liver, &c., &c.

Tarrant's Cordial Elixir of Turkey Rhubarb,

Takes its place as the best remedy for Dyspepsia or Indigestion of the present day, and, for its efficacy and safety, deserves the name of being, in truth, a Family Medicine. Those who suffer from excessive fatigue, mental anxiety, or intellectual application of whatsoever kind, will find it to be a medicine of extreme value. It is particularly recommended to those suffering from Bilious and Nervous Headache, Diarrhea, Constipation, Flatulency, Indigestion, Summer Complaints, Cholera Morbus, &c., &c. The utmost reliance can be placed on it, both as to its innocent nature and highly curative qualities.

Tarrant's Improved Indellible Ink,

For marking Linen, Muslin, Silk, &c., has been proved by many years' experience, to be the best, most permanent, and reliable preparation ever offered to the public. The superiority of this article is acknowledged by all; and purchasers and dealers will find it to their interest to give it a preference over all similar preparations.

Tarrant's Compound Extract of Cubebs and Copaiba,

Sanctioned by popular opinion and high authority of the most distinguished of the medical faculty. It offers to the afflicted a remedy, whose success has in every instance supported its deserved reputation. Being convenient and agreeable in its use, experience has proved that it retains in every climate its desirable and truly valuable character. It is in the form of a paste, is tasteless, and does not impair the digestion. It is prepared with the greatest possible care, upon well-tested principles. To persons following the sea, or going long voyages, this preparation possesses qualities far surpassing any other—neat and portable in form, speedy and efficacious in its operation, successful both in the earliest and worst stages of the severest disease, while the usual nauseous taste and unpleasant odor of Copaiba are wholly avoided in this preparation.

Prepared and sold, wholesale and retail, by JOHN A. TARRANT & CO., 275 Greenwich, cor. of Warren Street, New York; and for sale by all the principal Druggists in the United States, British Provinces, West Indies, and South America. Prices current sent by mail, when desired.

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Remarks on some of the Pharmaceutic Preparations employed in Medicine, especially Solid and Fluid Extracts.

BY CHARLES A. LEE, M.D.

THE uncertainty of medicine has been vastly increased in modern times by the varying qualities or even inert nature of the medicines administered. Medical art has, in innumerable instances, been held responsible for results of which it was wholly innocent, and for failures entirely unexpected. To this cause much of the scepticism, both in and out of the profession, regarding the curative properties of drugs, is owing; so that many of the educated and intelligent class have come to believe that there is no art and science of medicine—that it is far preferable to trust to nature or homeopathy than to rational medicine for a cure. It has been laid down as a self-evident proposition, as it is, that under similar circumstances the same medicines will produce similar effects; but as this can never be expected, so infinitely varying are the habits, constitutions, temperaments, &c., of individuals, it is not to be supposed that medicine can ever arrive at that certainty which we meet with in some of the other sciences. Still, much will be accomplished towards this end if we can only obtain medicines of uniform strength and purity. Is this possible at the present time? Are the drugs now attainable in our market, either in their crude state or as products of the pharmaceutic art, generally reliable in the treatment of disease? Is sufficient attention paid to the circumstances which are likely to cause a deterioration in their quality, or to the various processes by which their active principles are separated for the use of the practitioner?

When we consider the present relaxation in the enforcement of our drug-inspection laws in the port of New York—the consequent extensive importation of spurious and sophisticated drugs—their frequent adulteration in the home market—the frauds of the drug grinders, and the wholesale and retail dealers, as well as the imperfect and unscientific means of preparation adopted by many manufacturers, we shall no longer wonder that medicine is regarded as a very uncertain science, and still more uncertain in its practical applications for the relief of the sick.

And yet the case is not hopeless, nor is the physician unable to obtain reliable medicines if he will use the necessary care and is willing to pay the necessary expense. Within a few years past, schools of pharmacy, requiring a four years apprenticeship to learn the details of the business, have been established in our principal cities, and they annually send out graduates properly instructed and experienced in every thing relating to the proper selection and preparation of drugs, as well as dispensing them to the sick; so that city practitioners can, if they choose, obtain pure medicines and have them scientifically dispensed, and so, also, there are wholesale dealers, who have a laudable pride in sustaining the credit of their establishments, who use every precaution to keep none but the purest drugs. The names of such houses can easily be obtained if the country practitioner chooses, and he can, in nearly every instance, rely with confidence on the genuineness of the articles he procures from them. Such dealers know of but one quality of drugs, and that is the *best*, while others can supply all kinds, to suit the pockets and the wishes of customers. It is evident that much practical experience is necessary to convert pure drugs into safe and efficient medicines—that requisite skill in this department demands great study, extensive knowledge, and the utmost care; while it is a matter of common observation that the best drugs lose their medicinal virtues by unskillful preparation, and that “compounds of safe and efficient powers may become poisonous and changed in character by careless manipulation and ignorance.”

Again, it is a matter of congratulation to the profession that establishments have been founded for the manufacture of solid and fluid extracts, in which greatly improved processes and apparatus have been introduced, such as the steam bath and vacuum pan, in

which, by removing atmospheric pressure, the boiling point is greatly lowered and evaporation much facilitated, thus entirely guarding against those spontaneous changes in vegetable organic principles, which are unavoidable when exposed to the influence of the air. The narcotic inspissated juices or clarified extracts thus prepared, as conium, hyoscyamus, stramonium and belladonna, we have found wholly reliable in the doses recommended. The green coloring principle and the inert and insoluble vegetable albumen being separated, they possess the odor of the undried plant—are far stronger than those prepared according to the United States Pharmacopœia, and of course are to be administered in doses smaller than those recommended by the standard authorities. In the early part of our practice, nothing was more common than to meet with disappointment in regard to the effects of these narcotic extracts. Ten and even twenty grains, for example, of *extract of conium* were given without the slightest fear of any dangerous effect, and we have known a physician to take ninety grains of the same in the course of a few hours without experiencing the slightest narcotism. The same will hold true as regards the other narcotic extracts, whether prepared by the Shakers or by some private manufacturer. Now, however, great caution, it is well known, is necessary in the use of these preparations—a single grain of extract of belladonna often causing temporary amaurosis, and two or three grains of the other extracts producing narcotism. The difference is chiefly accounted for by the fact that formerly evaporation was performed over a naked fire, when the heat was amply sufficient to decompose the active principles. I have never known insp. ext. of belladonna prepared *in vacuo*, applied around the eye in the form of a paste fail to dilate the pupil, which may be regarded as a positive test as to its efficacy; nor extract of conium thus prepared, fail to yield its characteristic odor when softened into a paste with water and a solution of potash added; proving, beyond all question, the presence of *conia*, its active principle. The same remarks are applicable to *hydro-alcoholic* and *alcoholic extracts* of the same plants. By submitting the dried leaves to the action of diluted alcohol, a great proportion of the albuminous and extractive matters are left behind, while by an evaporation *in vacuo* the active principles are obtained in a still more concentrated form, than when the expressed

juice, containing a portion of the cellular structure, is employed as in the former class. These extracts also possess the genuine odor of the plant, and are efficient in even less doses than the former, so that one-half a grain of the extract of aconite, belladonna, or stramonium, will generally produce decided effects. Similar preparations of *nux vomica* and *ignatia bean* have never failed me in a single instance. They are both most invaluable agents in the hands of an experienced practitioner. So, also, cathartic solid extracts, as of jalap, rhubarb, hellebore, butternut, podophyllum, and compound colocynth mass, have proved all that could be wished, or that was expected of them. If any fault can be found with them, it is from their too great, rather than their too little activity. But this can be easily obviated by combination, as with hyoscyamus, which prevents griping by lessening their irritant and drastic properties. Thus, your compound cathartic pill would, doubtless, be improved by diminishing the amount of *podophyllin* one-half, or lessening the size of the pill; as it is it often acts powerfully as a hydragogue, especially in very susceptible subjects. The latter, in doses half as large as the extract of jalap, will produce equal effects.

No one, as I have ever heard, has called in question the efficiency of recent bitter extracts, as of gentian, quassia, colombo, chamomile, eupatorium, horehound, &c., and the same is true of the astringent extracts, as geranium, blackberry, white oak, logwood, rhatany, &c., nor is there any reason to suppose that other solid extracts are less reliable than those above named.

Fluid extracts, which were unnoticed in the United States Pharmacopœia until the edition of 1850, were then directed to be prepared by maceration and percolation, evaporating over a sand bath. They are unnoticed in British and other European pharmacopœias of the most recent date, and yet they possess many important advantages over the other preparations, especially when carefully prepared, as they now are in all first rate establishments, by the improved steam apparatus, in vacuo. They consist of *concentrated syrups*, representing an equal quantity or half an equal quantity of the drug from which they are obtained, as the fluid extracts of senna, rhubarb, spigelia, and sarsaparilla, having the advantage of smallness of bulk, facility of administra-

tion, miscibility with other fluids, and of not easily undergoing change by keeping, temperature, &c.

In a second class, officinal alcohol only is employed as a solvent, as the fluid extract of valerian, one dram of which exceeds in strength double the quantity of the tincture, or thirty grains of the powdered root, while in a third class *oleo-resins* are held in solution by ether, as cubebs, black pepper, capsicum, male fern, cardamom, Canada snake root, ergot, &c., a few drops of each of which constitute a dose, and given in some saccharine or mucilaginous solution, or added to other ingredients, in pill mass. The fluid extract of cubebs may be administered in gelatine capsules, while that of black pepper forms an excellent adjunct to quinine in form of pill. In a large majority of these preparations, alcohol and water, or proof spirit, is the menstruum employed, the alcohol being afterwards separated by distillation, except a sufficient quantity for due preservation. In looking over your long list of preparations, I find you now prepare no less than fifty-nine solid extracts, forty-four resinoids and alkaloids, and one hundred and fifty fluid extracts. Of these, twenty-three of the solid extracts are from plants of indigenous growth, also forty-one of the resinoids and alkaloids, and eighty of the fluid extracts; for the introduction of a majority of which, we are indebted to your establishment.

Attempts have recently been made, however, to destroy the confidence of practitioners in the whole class of fluid extracts, and in a paper read before the New York Academy of Medicine a few months since, the writer in conclusion stated, that "they possess no positive value." His objections, which apply to all extracts however made, are, "that they are not, and cannot be uniform in strength, because the plants from which they are taken possess different amounts of therapeutic properties; that they are liable equally with the plant from which they are compounded, to destructive alterations; that each new parcel or preparation must be tested separately before its therapeutic value can be known." So that Prof. Wood's definition of fluid extracts, viz.: "that they are highly concentrated solutions of the active constituents of medicines, or the active constituents themselves extracted in the fluid state," will not, he thinks, hold true. The writer also states that he experimented, to what extent we are not informed, with

the fluid extracts of veratrum, jalap, Indian hemp, ergot, rhubarb, ipecac and cinchona, and found them of less strength than represented. The fluid extract of ergot is condemned, because it would not produce uterine pains in a non-pregnant female! Now, as a simple act of justice the name of the manufacturer of the samples experimented with, should have been stated. But as all such preparations are sweepingly condemned, perhaps, it was not deemed necessary; all solid extracts, also, being included as equally untrustworthy. We submit that the conclusion of the writer is too broad for his premises, nor is it sustained by the experience of the profession generally. It is absurd and incredible to suppose that fluid and solid extracts should have come into such general use and be so highly esteemed, if they did not possess active medicinal properties. No fact has been more frequently demonstrated in our own experience than this, nor has professional opinion ever been more uniform in regard to any matter of common interest than this. Had the writer stated that these preparations are not always of uniform strength, and that they sometimes, from accidental circumstances, are liable to deterioration, or "destructive alterations," he would only have affirmed what is well known to every practitioner; as it is, his exaggerations have nullified his statements, and made it unnecessary to undertake their serious refutation. It is true, that "when a plant dies there is a retrogressive chemical change, which effects the decomposition of substances already formed," but the writer ought to know, that in fluid extracts especially, all chemical action is effectually prevented by the alcohol, or other substances added for this purpose. (All such preparations as well as solid extracts should be kept air tight, to prevent the escape of their volatile portions, and the influence of atmospheric changes. Very many solid extracts will absorb moisture rapidly from the atmosphere, and should be kept in cool, dry places.) We might refer to many other statements wholly unsustained by proof. Thus it is remarked that "the dandelion root, when cultivated in our gardens almost ceases to produce an active principle, but is largely increased in starch, sugar, and gummy matters." Now, no fact is better known to manufacturers than that this plant when cultivated is much better than the wild, and the same is true of burdock, and yellow dock, both of which yield much stronger preparations, when

cultivated, than when growing wild; we are aware that climate, temperature, soil and moisture make great changes in the constituents of all vegetables; but then their influences are by no means disregarded by the cultivators of medicinal plants; we have never known any of them attempt to obtain an extract of *cannabis indica*, from the Indian hemp of our own country. Cultivators of medicinal plants, state that the variations of climate, and character of seasons, whether hot or cold, moist or dry, have a decided influence upon the development of the active principles of plants. This is often observed in *conium* of spontaneous growth—a dry season being favorable to a development of its active principle *coniū*; while a moist season gives a succulent growth; of course affecting the character, especially of the inspissated extract made from the green plant, the difference not being so great with the dried with the same menstruum. Prof. Christison, the highest authority, is of opinion that the influence of cultivation upon medicinal plants is altogether over rated, and he remarks that from “experiments made some years ago at the Royal Infirmary, in Edinburgh, the inferiority of cultivated plants, if it exists at all, seems not appreciable in practice,” and in regard to the permanence of solid extracts, he observes “that the distrust entertained of this particular form rather depends on the negligence or ignorance with which it is usually prepared, than attaches absolutely to the form itself.”—(*Dispensatory*, p. 12.)

Speaking also of the extracts prepared by steam, in vacuo, at a low temperature, he says “that they keep remarkably well,” that he has specimens in his possession (1848) made in 1820, “which are still in excellent preservation.” Of the extracts thus prepared, he adds, “they are of a paler color and finer odor than those obtained in the ordinary manner—their aroma is purer and stronger—they are more soluble—and undoubtedly their energy is greater,”—(*Loc. Cit.* p. 14,) and this, be it remarked, refers to the solid and not fluid extracts, which latter, are far less liable to undergo change than the former. It is remarked by Prof. A. T. Thomson, that “few plants which are medicinal admit of cultivation”—(*Mat Medica*, p. 65,) and yet it is now well ascertained to have no foundation in truth. It is not borne out by the experience of cultivators and manufacturers in this country, nor at the extensive establishment at Mitcham, in England. Indeed, I am well assured

that the contrary is the case, in regard to a large majority, if not all medicinal plants. It is so, especially with the narcotic class, and those that yield volatile oils. By an analysis of a plant we discover its organic constituents, and by analyzing the soil we find the elements necessary to be introduced, in order for a full development of the plant. This principle is now well understood and constantly acted on in practical agriculture, gardening, horticulture, &c. It has, also, been successfully carried out in the cultivation of medicinal plants; as in using large quantities of the nitrates of potassa and soda as well as guano, which abounds in nitrates, in raising narcotics; hence, perhaps, the complaints we so often hear of the too great strength of recent extracts of *hyoscyamus*, *belladonna*, *conium*, *stramonium*, &c., as compared with the foreign preparations of the same articles.

This whole subject, however, of the influence of climate, cultivation, soil, manures, &c., on the development of medicinal plants and their active principles, requires further careful observation and experiments, and the medical profession naturally look to the cultivators of such plants, for further light upon the matter.

Iris Versicolor.

(*Blue Flag.*)

BLUE flag is found in most parts of the United States, in meadows, swamps, or wet situations. It blossoms in June; has large blue flowers which are very conspicuous, and are familiar to most of our readers; they afford a fine blue infusion, which serves as a test for acids and alkalies.

The *Iris* tribe of plants is a very extensive one, and many species are used in medicine. In Europe, the *I. Fetidissima*, *I. Florentina*, *I. Germanica*, *I. Pseudo-acorus*, and *I. Tuberosa*, have, at various times been in use in practice. The *florentina* is the only one officinal in this country, although the *pseudo-acorus* is sometimes used here. Of the numerous American species that most used is the *versicolor*.

The roots of the whole family so far as examined are more or less acrid, and possessed of cathartic and emetic properties. The recent root of the *versicolor* has a nauseous, acrid taste, which is

imparted partially to water and perfectly to alcohol; the expressed juice is very acrid, and is often used as a local application. The root is the medicinal portion, and its medicinal activity depends upon the period of its collection, which should be at the time its leaves begin to decay; earlier than this period, and particularly in the spring, or while in flower its powers are comparatively feeble.

It possesses alterative, cathartic, and diuretic properties, and is highly recommended by some medical writers, while others reject it as being unsafe and dangerous. It is probable that it has at times been administered in over doses, and the prejudice alluded to has arisen from this cause; for the same reason we should reject very many valuable articles of the *materia medica*. Dr. Bigelow states that he found it very efficacious as a purgative, but apt to produce nausea and prostration of strength. Dr. Andrews, of Michigan, uses it as a cathartic frequently, and when combined with cayenne pepper, or ginger, not less easy and effectual in its operation than the ordinary, more active cathartics, and preferable on account of its less disagreeable taste. The experience of others concur in the importance of combining stimulants, as xanthoxylin, camphor, or oil of peppermint, annis or fennel, to overcome all griping tendency. As a cathartic it is said to act on all parts of the canal, but more particularly on the upper portion. It acts as a stimulant to the liver and pancreas. When given either alone or in combination, in quantities insufficient to produce catharsis it is a valuable alterative, exhibiting well marked influence over the entire glandular system.

It increases the salivary flow, and is capable of producing well marked ptyalism, particularly if combined with podophyllum and xanthoxylum; which can be distinguished from that produced by mercury by the absence of its peculiar feter. Dr. King states that "equal parts of blue flag, podophyllum, and prickly ash bark, given in doses of ten grains every two hours, to fall short of catharsis, will act as a powerful alterative, frequently causing copious salivation without injury to the teeth or gums."

In syphilis, either primary or secondary, it is highly recommended. "In eradicating the syphilitic virus and correcting the diathesis of the system," it is claimed to be not only powerful but positive and certain. It may be employed alone or in combination

with other alteratives, as podohyllum, phytolacca, stillingia, cimicifuga, turkey corn, conium, or asclepias incarnata.

In scrofula, particularly those cases accompanied by hepatic derangement, given in small doses alone as an alterative, as well as in combination with other alteratives, is claimed to have few superiors. Also in rheumatism, glandular swellings, and indurations, eruptions of the skin, visceral engorgements and torpor, as of the liver and spleen.

Dr. McBride prescribed it with great success in dropsy, combining it with corn snake root, *eryngium yuccifolium*, in proportion of blue flag two ounces; button snake root two drams. Mention is also made of its use in a case of hydrothorax, and anasarca; in some cases it may be combined with an equal quantity of the saturated tincture of *euphorbia ipecacuanha*; also with the *apocynum cannabinum*, which is highly recommended in dropsy. A combination of iridin, three grains; leptandrin, six grains; bitartrate potassa, two grains, has been suggested as a valuable hydropogue cathartic.

The medicinal properties of blue flag are due to an *oil* or *oleo resin* which possesses, in a high degree, the taste and smell of the root, and to which has been given the name of *irisin* or *iridin*. When mixed with an equal portion of sugar of milk it forms a powder convenient for administration. The preparations of blue flag are the alcoholic pilular extract, fluid extract, and the *oleo resin* or *iridin*. We have often met with this preparation which did not possess its proper characteristics, and an examination satisfied us that it contained a very large proportion of magnesia, and that many of the so-called concentrated preparations contain a large admixture of either the powdered substance, salt or magnesia; or that they may be simply a dried, aqueous or alcoholic extract powdered. It is extremely difficult to always detect this, particularly so for the inexperienced—the tests, however, are simple.

Treat the *iridin* with pure hot alcohol; evaporate the soluble part to the consistence of a syrup; to this add water, which will precipitate the *oleo-resin*, which when dried and weighed will give the quantity of true *iridin*. Treat the insoluble part by water, which will dissolve any sugar of milk or salt it may contain; divide this solution to one portion; add nitrate of silver; if it gives a white precipitate, soluble in ammonia, it is salt. Evaporate the

other to dryness; if a white residuum having a saccharine taste, it is sugar of milk. If the water leave an insoluble part, it is root or magnesia, or carbonate of magnesia. Treat the insoluble part by muriatic acid; if undissolved it will be found to be root or some vegetable substance; if dissolved it is magnesia, or carbonate of magnesia. Into this solution pour some *phosphate of soda* and *ammonia*; if a white precipitate, it is magnesia; effervescence when the acid is added indicates carbonate of magnesia.

If an alcoholic extract powdered, it should be all soluble in alcohol; if an hydro-alcoholic extract, a part only should be soluble in alcohol. The quantity of *iridin* can be ascertained by the first process stated; the insoluble part treated by water will dissolve in it, and will be found to contain the gum, sugar, coloring matter, &c. If an aqueous extract it will be soluble in water and not in alcohol. Any admixture should be stated upon the bottle of a pure preparation; an amount equal to one-half of the quantity stated should be soluble in hot alcohol.

The alterative dose of Iridin is one half to two grains. Cathartic from two to five grains.

Compound Extract of Colocynth, U. S. P.

BY AN APOTHECARY.

THE consumption of this article is very large throughout the United States, and no one article of equal importance is subject to similar adulteration. It is difficult to find two articles of the same strength in market, showing that the formulæ of the U. S. P. is not observed in its manufacture. If, indeed, some do observe the proportions, they do not its requirements; as that formulæ in all cases requires the very best material to be used. The scammony should contain the largest per cent. of resin procurable in market. The aloes should be the socotrine—colocynth, exhausted of its virtues by diluted alcohol. In the article upon scammony and its adulterations in your Journal of April and May, you gave a formula for making the commercial scammony, which explains one cause of the inertness and cheapness of much offered in market. It is not unfrequently the case to have compound ext. colocynth offered at a price less per pound, than the scammony it

should contain would cost; and yet it is labeled U. S. P., indicating that all the official formula demands has been observed in its preparation.

I have, since my attention has been drawn to this adulteration ascertained that it is frequently made by using aloes, known as Barbadoes, or "horse" aloes—the cheapest in market and procured at ten cents per pound, while socotrine aloes costs from forty to fifty cents. Scammony of the commercial variety, procurable at \$2 per pound, while virgin scammony costs \$7.50 to \$8.00 per pound. Colocynth, being seeds and pulp ground and powdered together; giving, in this form, greater bulk or yield of extract. Powdered cardamom, of cheap quality and badly mixed—the soap being the only article which enters the compound of official quality, that being too cheap to tempt the cupidity of the compounder.

These articles are well mixed together with a little sweet oil, to give a good external appearance and make the preparation saleable. When exposed for a time in a jar with a loose cover, it becomes dry and mouldy, owing to the large quantity of powdered colocynth present in it; this I have never seen occur in a well "dried" compound, prepared by exhausting the colocynth with diluted alcohol, and adding it in the form of an extract. The formula of the U. S. P. is as follows:—

"Take of Colocynth, deprived of seeds and sliced,	-	Six Ounces.
Aloes in powder,	- - - - -	Twelve Ounces.
Scammony in powder,	- - - - -	Four "
Cardamon seed in powder.	- - - - -	One "
Soap,	- - - - -	Three "
Diluted alcohol,	- - - - -	One Gallon.

Macerate the colocynth in the diluted alcohol for four days; express and filter the liquor, and add. to it the aloes, scammony and soap; then evaporate to the proper consistence, and near the end of the process, mix the cardamon with the other ingredients." Prepared in large quantities after the above formula of good materials I should estimate the cost at nearly \$2 per pound, depending upon the market prices of the materials, and will afford to large manufacturers only a small profit at the price a prime article is now sold at.

Dr. Squibb estimates that the official article which he prepared at the U. S. Naval Laboratory, in a *dry powdered state*, to cost

much more; the yield probably being very much less than when left of a pilular consistence. He says: "when made from good Bonair gourd aloes and scammony, containing from sixty to sixty-seven per cent. of resin, this preparation costs about \$3 per pound, exclusive of labor and skill of manufacturing, or say \$3 1-2 as the lowest entire nett cost of manufacture on a scale of twenty-five pounds—and yet it is confidently believed that some hundreds of pounds have been supplied to the New York market during the last year, at prices varying from seventy-five cents to one dollar largely, as the price is lower." He suggests in view of the varying per centage of resin in the article sold as virgin scammony, and the great adulteration of scammony, to substitute the *resin*, which would make the preparation more uniform, provided the prescribed quantity was always used.

Mr. Banvart proposes to substitute podophyllin for the scammony, using only one half the quantity of scammony, and that while the cost of the compound would remain unchanged, its strength would be more uniform, inasmuch as podophyllin is readily procurable, of a pure quality, and proposes its substitution for extract jalap in the U. S. P. compound cathartic pill, using instead of the dram of extract of jalap, forty-five grains of podophyllin.

Dr. Stabler in an article upon podophyllin, published in the transactions of the Pharmaceutical Association, says:—

"The price of scammony, together with the fact that it is nearly always adulterated—indeed the pure article is seldom met with in the drug market,—renders it very desirable that we should find an efficient substitute: and if it can be obtained from this—one of our own indigenous plants—at a comparatively low price, and of uniform composition, it will enable us to dispense with an article of such uncertain strength as commercial scammony now is.

Podophyllin is an active hydragogue cathartic, fully equaling virgin scammony in effect, resembles it in the character of evacuations produced by it, and is applicable to similar diseased states of the system, and can, I think, be advantageously substituted in any of the preparations of the Pharmacopœia, in which scammony forms an ingredient.

[From the New York Medical Journal.]

Simple Tests for some Important Medicinal Preparations.

BY EDWARD R. SQUIBB, M. D.

(Concluded.)

SPIRIT OF NITRIC ETHER.—Two or three fluid drams of good sweet spirit of nitre that is not more than seven or eight months old, and kept in the usual way, contained in an ordinary test tube, and plunged into water that has been previously heated to 164° will boil pretty actively; while if freshly made, or not more than two months old, or if well preserved from light and air, no matter what the age, it will boil actively when surrounded with water at a temperature of 156° . From the fact that this among other liquids may be heated far above its boiling point without ebullition, it becomes necessary to drop a few small fragments of broken glass into the test tube with the spirit after the latter has been heated and while still held in the water. Another precaution necessary in the application of this test is to discriminate between the mere formation of small gas bubbles around the fragments of glass and a true ebullition; for, whilst the former will occur as a fine effervescence, at any temperature above 140° in any spirit of nitre that contains hyponitrous ether at all, true ebullition, in which the vapor bubbles are much larger, and in which they reach the surface, and form by their succession a bead around the edge of the liquid, only occurs at the boiling points named. The preparation should not be quite colorless, but of a pale straw tint, and should effervesce very slightly upon the addition of the carbonate of ammonia. When slightly acid, carbonate of ammonia is the best corregent, because the salts formed are therapeutically similar. The officinal preparation is a solution of five per cent. of hyponitrous ether in alcohol. The ether is the medicinal agent, and the alcohol is necessary for its preservation and dilution only, the latter, indeed, being often contra-indicated, as in some febrile conditions, where the former would be useful.

In commerce, however, it is rare to find the proportion of the hyponitrous ether exceed three per cent.; while in a great majority of cases it is below two per cent., and often in a proportion too small to be detected except by the odor. One of the largest manufacturers in the United States makes it of five different qualities, to suit the market, and all these below the officinal standard. Another maker (and the two produce a very large proportion of all that is sold in the United States) sells but one kind, and that, though of varying strength, is commonly below two per cent. The above test alone will reject all such specimens.

It thus happens that the physician who prescribes this preparation in view of its supposed diuretic and diaphoretic effects is disappointed, and obtains instead, to some degree, the opposite effect of so much alcohol. Hence this preparation also is gradually falling into disfavor and disuse. In view of the circumstances mentioned in connection with these preparations, and the like tendency in many others, it is well worth while for the profession to consider

how far it is willing to sacrifice its valuable curative agents to the cupidity of manufacturers. For detailed examinations of specimens of sweet spirits of nitre, Hoffman's anodyne, &c., see *American Journal of Pharmacy*, vol. 28, p. 302 *et. seq.*, also vol. 29, p. 202 *et. seq.*

CHLOROFORM.—When equal volumes of chloroform and colorless concentrated sulphuric acid (the strong commercial oil of vitriol answers very well) are shaken together in a glass stoppered vial there should be no color imparted to either liquid, or but a faint tinge of color, after twelve hours' standing together. Nor should there be any heat developed in the mixture at the time of shaking it first. Any particles of dust, or cork, or other organic matter that may have been in the vial used, or in the chloroform, will, by reaction of the acid, produce a tinge of color in the acid or its separation from the chloroform, corresponding to the quantity of such particles present, and therefore in the application of the test, care must be taken to avoid any such particles; for, if the acid be only faintly tinged at the end of twelve hours' contact with the chloroform, it may be attributable to some such collateral accidental cause. But if, at the end of twelve hours or sooner, the acid becomes yellow or brown, or any darker color, it should be unhesitatingly rejected. If the mixture of acid and chloroform should become warm on shaking first, an admixture of alcohol would be indicated. One or two fluid drams of chloroform spontaneously evaporated from a clean surface of glass or porcelain, or from a piece of clean unsized paper, should leave no odor after it. Commercial chloroform will generally turn the acid brown within two or three hours, and will often render it black and tarry-looking within two or three days; whilst with chemically pure chloroform there is absolutely no reaction within many days.

CALOMEL.—The most common and injurious contamination of calomel is corrosive sublimate, whereby its otherwise mild action is rendered irritant. This impurity is easily detected by shaking a dram or two of the calomel in a test tube with distilled water, and, when the water shall have become clear, adding a drop or two of liquor ammonia. If corrosive sublimate be present the ammonia will precipitate it and render the water cloudy.

IODIDE OF MERCURY is often irritant and harsh in its action through contamination with biniodide from faulty preparation. The writer has seen its use abandoned on the ground of idiosyncrasy, when on examination, it was easily shown to contain a notable proportion of the irritant, harsh, red iodide.

The red iodide may be easily detected in it by rubbing a little of the suspected iodide in a mortar with strong alcohol, and then allowing it a few moments to dry. The evaporation of the alcohol leaves the red iodide along the pestle marks as a border to the iodide. A minute contamination becomes very easily seen in this way.

MERCURY WITH CHALK is of late very commonly found to be harsh and irritant in its action, producing or increasing intestinal irritation to such an

extent that many practitioners have abandoned its use, while others are puzzled by its effects.

This also is a result of faulty preparation, wherein, through time and labor-saving expedients, or bad appliances, a portion of the mercury becomes oxidized instead of being simple comminuted or divided. However well prepared, it almost always contains a very small proportion of suboxide, but this being one of the mild preparations of mercury, never produces the bad effects alluded to. To detect the peroxide, or irritating property, a dram or two of the mixture is treated with an excess of acetic acid, and the solution filtered off clear. A few drops of hydrochloric acid is then added to the clear solution. If the preparation be good this will produce only a slight precipitation of insoluble subchloride from the small quantity of acetate of suboxide formed. If the preparation be old, or badly kept, having had free access of light and air, a pretty copious precipitate will be formed by the hydrochloric acid. The clear solution is again filtered or decanted off this precipitate, and liquor ammonia added to it. If the preparation was contaminated with any peroxide it will now be precipitated by the ammonia as white precipitate.—*See American Journal of Pharmacy*, vol. 29, p. 388.

BLUE PILL is also liable to contain oxydes of mercury, and thus to lose its mild character and operation through faulty preparation. In this the oxydes are detected in precisely the same way as in the case of mercury with chalk.

IODIDE OF POTASSIUM is occasionally contaminated with carbonate of potassa to the extent of impairing its medicinal effect. This is easily detected by adding lime water to the solution of the iodide, when carbonate of lime will be precipitated and render the mixture cloudy.

BITARTRATE OF POTASSA frequently contains much tartrate of lime. This may be detected by stirring a few drops of liquor ammonia into a mixture of a few grains of the specimen in two or three drams of cold water. The ammonia renders the otherwise insoluble potassa salt quite soluble, whilst it has no immediate effect on the tartrate of lime. If, then, a portion remains undissolved after the application of the test, it may be regarded as an impurity.

It is hoped that the simplicity of these tests for a few important substances may not only lead to their frequent adoption, but that the opening of the subject may stimulate others to search for and publish better tests, and to extend the list of substances that may be easily and simply tested.

PEPSINE WINE.—We find in *L'Union Medicale* that the following pepsine wine is extremely agreeable and efficacious

Take of starchy pepsine, (prepared according to Messrs. Corvisart & Bourdault's formula,) one and a half drams; distilled water, six drams; white wine (of Lunel,) fifteen drams; white sugar, one ounce; spirit of wine, three drams. Mix until the sugar is quite dissolved, and filter. One tablespoonful of this wine contains about fifteen grains of pepsine, and may be given after every meal.

Annual Meeting of the New York State Medical Society.

THE fifty-second annual meeting of the New York State medical society convened in the Common Council Chamber, City Hall, on Tuesday morning, February 1st, at eleven o'clock.

The society was called to order by Dr. Thomas C. Brinsmade, of Troy, the president. He addressed the members at considerable length, thanking them for the honor conferred on him, in selecting him to preside over their deliberations. He congratulated the society upon its success, and the influence possessed by it; and referred to the value of its transactions as comparing favorably with the transactions of the London medical society. Believing that a proper interest was not manifested by the physicians of the State in medical societies, the president addressed circulars to the societies of every county in the State, and received answers from twenty-eight counties. In these counties little more than one-half of the regular physicians were members of the societies, and not more than one-third of these attended meetings. He dwelt upon this apathy, and called the attention of the society to it, in the hope that it might be remedied.

He recommends an interchange of transactions with other State societies. He approves of the institution of a second degree in the medical profession, and suggested that the first degree be styled doctor of medicine, and the second degree, bachelor of medicine. He alluded to the necessary steps to be taken to secure these degrees, and commented upon the justice and necessity of this course, believing that it would greatly elevate the profession. There are five medical journals published in the State, and three republished. The medical profession of this State now occupies a higher position than at any other time. He recommends that a suitable delegation be sent to the meeting of the American medical association, at Louisville.

On motion of Dr. Alden March, a vote of thanks to the president for his inaugural address was adopted, and a copy requested for publication.

The following committees were appointed by the president:—

ON CREDENTIALS.—DRS. B. F. Barker, Alexander Thompson, S. B. Willard.

ON NOMINATIONS.—*First Dist.*—Dr. S. C. Foster; *Second Dist.*—Dr. J. H. Parker; *Third Dist.*—Dr. B. P. Staats; *Fourth Dist.*—Dr. H. Corliss; *Fifth Dist.*—Dr. N. H. Dering; *Sixth Dist.*—Dr. F. Hyde; *Seventh Dist.*—Dr. H. Jewett; *Eighth Dist.*—Dr. F. H. Hamilton.

Dr. A. H. Hoff moved the appointment of a committee to invite the Governor and State officers, and the medical members of the Legislature, to take seats with the society during the session. Adopted, and Drs. Hoff, Taylor and Sprague were appointed such committee.

Dr. Sprague moved that so much of the president's address as relates to the republication of important papers in the earlier publications of the society, now mainly out of circulation, be referred to a select committee of three. Adopted, and Drs. Sprague, S. D. Willard and Thorn were appointed such committee.

A communication was received from Dr. Thos. McCall, of Utica, regretting his inability to be present with the society, and enclosing a paper entitled "the Commandment of Knowledge, in relation to medical doctrines and methods."

Dr. Parker, of Dutchess county, read a paper on "the treatment of Vericose Ulcers," which was referred to the publishing committee.

The committee on credentials presented their report, which was accepted.

The following delegates then enrolled their names:—

Thos. C. Brinsmade, Troy.

Geo. W. Bradford, Homer, Cortland Co.

Jas. Thorn, Troy.

B. P. Staats, Albany.

Jas. V. Kendall, Clay, Onondaga Co.

Alex. J. Dallas, Camillus, Onondaga Co.

Edward H. Parker, Poughkeepsie, Dutchess Co.

C. V. W. Burton, Lansingburgh, Rens. Co.

Seth Stover, Kalonah, Westchester Co.

A. L. Sanders, Brookfield, Madison Co.

John Ball, Brooklyn.

Wm. Bay, Albany.

N. H. Dering, Utica.

J. F. Trowbridge, Syracuse.

Alex. H. Hoff, Albany.

Samuel H. Freeman, Albany.

Alden March, Albany.

James H. Armsby, Albany.

Alfred Wotkyns, Troy.

J. S. Sprague, Cooperstown, Otsego Co.

B. Fordyce Barker, New York.

Hiram Corlies, Greenwich, Wash. Co.

Simeon Snow, Root, Montgomery Co.

Jehiel Stevens, Pompey, Onondaga Co.

Orson M. Allaben, Margaretville, Delaware Co.

J. N. Northrop, Decatur, Otsego Co.

J. M. Sturdevant, Rome, Oneida Co.

William Taylor, Manlius, Onondaga Co.

J. H. Pearse, Friendship, Allegany Co.

S. W. French, Lisle, Broome Co.

Frederick Hyde, Cortland.

Taylor Lewis, Troy.

R. B. Bonticou, Troy.

E. W. Carmichael, Sandlake, Rens. Co.

M. M. Marsh, Manlius, Onondaga Co.

H. S. Chubbuck, Elmira, Chemung Co.

Charles Barrows, Clinton, Oneida Co.

Nelson Nivison, Hector, Schuyler Co.

Wilson S. Bassett, Mt. Vision, Otsego Co.

S. C. Pettingill, Hancock, Delaware Co.

James Lee, Mechanicville, Saratoga Co.

C. V. Barnett, Windham Centre, Greene Co.

Charles C. F. Gay, Buffalo, Erie Co.

Levant B. Cotes, Batavia, Genesee Co.

Chas. M. Kingham, McGrawville, Cortland Co.

Harvey Jewett, Canandaigua, Ontario Co.

Daniel T. Jones, Baldwinsville, Onondaga Co.

Mason F. Cogswell, Albany.

U. G. Bigelow, Albany.

S. Oakley Vanderpoel, Albany.

Howard Townsend, Albany.

J. V. P. Quackenbush, Albany.

W. D. Purple, Greene, Chenango Co.

Aug. Willard, Greene, Chenango Co.

Dr. Vanderpoel, of Albany, moved that the resolution adopted at the last meeting, appointing a committee to make arrangements for a dinner, be reconsidered, and the resolution laid upon the table. Adopted.

Dr. George Cook, president of the Canandaigua lunatic asylum, was made an honorary member of the society.

Dr. William Taylor, of Manlius, moved the appointment of a committee to consider what action on the part of the society can be taken best calculated to insure a more general vaccination throughout the State. Adopted.

The committee to invite the Governor and others, to take seats with the society, reported that they had discharged that duty. Report accepted and committee discharged.

Dr. March invited the members of the society to visit the hospital at one o'clock, to witness the operation of amputation; the patient being Montgomery Bull, whose arm had been terribly lacerated by machinery. The invitation was accepted, and the members proceeded to the hospital, where the operation was performed by Dr. J. H. Armsby, of Albany; the arm being amputated at the shoulder. *The society then took a recess until three o'clock.*

AFTERNOON SESSION.

The society re-convened at three o'clock.

Dr. Sprague moved the appointment of a committee of three to request of the Assembly the use of their chamber, in which the annual address may be delivered; and also to invite the Governor and the members of the Legislature to be present. Adopted.

Dr. J. S. Sprague, B. P. Staats and Ball, were appointed said committee.

Drs. W. C. Rogers, of Green Island, Swinburne and Moore, of Albany, C. R. Agnew, of New York, and C. R. Millington, of Herkimer, were invited to take seats with the members of the society.

The Chair announced the following committee on Dr. Taylor's resolution on vaccination, adopted at the morning session; Drs. Wm. Taylor, Blatchford and Alden March.

A communication on the subject of "Partial Dislocations, Consecutive and Muscular Affections of the Shoulder Joint," by Alfred Mercer, M. D., as read before the Onondaga Co. medical society, was presented, and referred to the publishing committee.

Dr. March presented a sketch of the life of the late Dr. James A. Billings, as read before the Genesee medical society, which was referred to the publishing committee.

The Censors of the Southern district reported that they examined, June 29, 1858, Carl August Ludwig Baur, and finding him qualified, recommended him to the president for a diploma. Report accepted.

A communication was read from the agent of Messrs. Garmer, Lamoureux & Co., which accompanied specimens of granules and drages, or sugar-coated pills.

A communication from Tilden & Co., was also read, accompanying which were a variety of medical preparations, consisting of fluid extracts, granules or sugar-coated pills. They have also forwarded to Dr. Howard Townsend a large number of specimens for the cabinet of the Albany medical college.

Dr. John Swinburne, of Albany, read a very interesting paper on "the treatment of Fractures of the Femur," which was referred to the publishing committee.

Dr. Parker moved that the pharmaceutical preparations presented to the society be referred to a committee of three, to report at the next meeting.

A brief discussion ensued, in which the impropriety of the society endorsing any particular medicine, was urged by different members.

Other members urged that the society had already adopted a resolution endorsing certain preparations, the efficacy of which were very justly doubted, and the object of appointing the committee was to investigate the subject.

The resolution was adopted by a vote of twenty-four to twenty-one; and Drs. E. H. Parker, Howard Townsend and Saunders were appointed the committee.

A resolution of thanks to Tilden & Co., and Garmer, Lamoureux & Co., for their specimens, was adopted.

Dr. Shove, of Westchester county, read a paper on "Congenial Tissue of the Soft Palate," which was referred to the publishing committee.

Dr. Cook, of Canandaigua, by invitation of the society, made a statement of the establishment and progress of the Brigham Hall lunatic asylum, at Canandaigua. An application has been made to the legislature to incorporate the institution.

Dr. Alden March, of Albany, read a paper on the "Displacement of the Heart." Referred to the publishing committee.

Dr. Saunders, of Madison, read a paper on "Cerebro Spinal Menengitis," as it prevailed in Madison county. Referred to publishing committee.

Dr. Gray, of the State lunatic asylum. and Dr. Bailey. of Albany, were invited to take seats with the society.

Dr. S. D. Willard, from the committee appointed at the last meeting "to petition the legislature, asking them to amend the statute, that the State medical society may elect permanent members, by senatorial districts, now or hereafter established;" reported that the interests of the society would not be promoted by a change in the present statute. The committee believe that the interests of the society might be enhanced by increasing the number of its honorary members residing without this state, and they recommend a change of the bye-laws. The report was adopted.

The following delegates enrolled their names during the afternoon session :—

Alex. Ayres, Fort Plain, Montgomery Co.
Thomas C. Finnell, New York.
Samuel Avery, Baldwinsville, Onondaga Co.
Elijah S. Lyman, Sherburne, Chenango Co.
J. V. Cobb, Rome, Oneida Co.
E. C. Mundy, N. Shore, Castleton, Richmo'd Co.
Sylvester D. Willard, Albany.
Wm. Govan, North Haverstraw, Rockland Co.
Thomas W. Blatchford, Troy.
Charles S. Wood, Greene, Chenango Co.

J. H. Jerome, Trumansburg, Tompkins Co.
Wm. C. Rogers, Green Island, Albany Co.
Darius Clark, Canton, St. Lawrence Co.
D. P. Bissel, Utica.
John D. Watkins, Liberty, Sullivan Co.
Levi Moore, Albany.
J. M. Delemater, Albany.
John P. Gray, Utica.
George Cook, Canandaigua, Ontario Co.
John Swinburne, Albany.

The society then adjourned until Wednesday morning at ten o'clock.

SECOND DAY.

The society re-convened at ten o'clock Wednesday morning, when the minutes were read and approved.

The following gentlemen enrolled their names :—

J. Conant Foster, New York.
Charles G. Bacon, Fulton, Oswego Co.
Franklin Everts, Oswego City.
A. B. Shipman, Syracuse, Onondaga Co.
W. H. Bailey, Albany.
Alexander Thompson, Aurora, Cayuga Co.
A. E. Farney, Middleville, Herkimer Co.
William G. Sands, Oxford, Chenango Co.
J. S. Whalley, Verona, Oneida Co.
Charles S. Goodrich, Brooklyn, Kings Co.
O. J. Fisher, Sing Sing, Westchester Co.
Morgan Snyder, Fort Plain, Montgomery Co.
W. H. H. Parkhurst, Frankfort, Herkimer Co.
James McNaughton, Albany.
Freeman Tartelot, Middle Grove, Saratoga Co.
H. E. Willard, Bern, Albany Co.

J. H. Reynolds, Wilton, Saratoga Co.
J. B. Reynolds, " "
M. G. Peck, Glens Falls, Warren Co.
Joseph Lewis, Albany.
Lewis F. Pelton, New Castle, Westchester Co.
Frank M. Hopkins, Keeseville, Essex Co.
Austin White, Parish, Oswego Co.
Almiron Fitch, Delhi, Delaware Co.
Joseph Bates, Lebanon Springs, Columbia Co.
John Davidson, Queens Co.
H. B. Wilbur, Syracuse, Onondaga Co.
Phillip T. Heartt, 2d, Waterford, Saratoga Co.
W. F. Carter, Cohoes, Albany Co.
Thos. J. Wheeler, Conewango, Chenango Co.
Amos Fowler, Albany.
F. H. Hamilton, Buffalo.

Drs. J. H. Reynolds, of Saratoga, F. M. Hopkins, of Essex, M. R. Peck, of Glens Falls, B. F. Ethridge, of Herkimer, Thomas J. Wheeler, of Cattaraugus Co. and James Winn, of New York, were admitted as honorary members to take seats with the society.

Dr. B. F. Barker moved to amend the bye-laws, so that the society may elect six honorary members annually, instead of two. Adopted.

A communication was received from the Herkimer county medical society, covering a "Dissertation upon the Influence of Vegetation upon Animal Life and Health." Referred to publishing committee.

An address read before the Sullivan county medical society, by John D. Watkins, M. D., on "Pneumonia; bilious and typhoid," was presented and referred to the publishing committee.

A communication was received from the Albany county medical society, covering a paper read before the society, by Dr. S. H. Freeman; being a biographical sketch of the late Hon. Samuel Dickson, M. D. Referred to publishing committee.

An invitation from Gov. Morgan, to visit the executive mansion in the evening, was received and accepted.

Dr. S. D. Willard, secretary, reported that he had exchanged transactions with the State medical societies of Connecticut, New Hampshire and California. Exchanges had also been made with thirty-five foreign societies, and through the regents of the University had received several communications in return. He had also received letters from Dr. M. S. Perry, of Boston, Mass., and Dr. S. Henry Dickson, of Charleston, S. C., acknowledging the receipt of honorary diplomas. The secretary also stated that on looking over the papers of the society, he had found a number of volumes of the transactions of the society from 1832 to 1837, which he had caused to be bound.

A motion was made and adopted that each member wishing copies of the volume, be charged seventy-five cents each.

Dr. Mundy, of Staten Island, moved the appointment of a committee of three, to investigate the facts connected with the Quarantine.

The resolution giving rise to a debate, which promised to be extended, Dr. Snow moved to lay it on the table, which motion was adopted.

Dr. Allaben moved that the legislature be petitioned to pass a law authorizing physicians and surgeons, when employed by coroners to make *post mortem* examinations in cases coming under their notice, to charge a fee commensurate to the services rendered; to be audited by the board of supervisors and paid by the county in which such services were obtained.

After a brief debate, the resolution was laid upon the table.

Dr. Goodrich presented a report of the removal of a tumour from the upper and posterior surface of the cranium—result fatal—by C. E. Isaacs, M. D., one of the surgeons of the Brooklyn city hospital. Referred to the publishing committee.

Dr. F. H. Hamilton, of Buffalo, read a paper "on Shortening in fractures, in the neck of the Femur." Referred to the publishing committee.

Drs. Joseph Lewis, Babcock, Henry March, Adams and Fondoy of Albany; and Dr. Cullen, of Brooklyn, were admitted to seats with the society.

Dr. James McNaughton, from the committee to whom was referred the several essays, offered in competition for the prize offered by the society, for the best dissertation on scarlet fever, awarded the prize to Henry A. Carrington, of Hyde Park, N. Y. Report accepted.

A communication was received from the Westchester county medical society, covering "Biographical sketches of the deceased physicians of Westchester county." Referred to the publishing committee.

Dr. A. Hoff, of Albany, presented "an Address on the Registration of Diseases, by W. C. Rogers, M. D.," as read before the Albany county medical society. Referred to the publishing committee.

Dr. S. D. Willard, of Albany, read a very interesting paper on "Diphtherite," or the sore throat disease, so prevalent in Albany.

Dr. J. V. P. Quackenbush, of Albany, read a report in accordance with a resolution passed at the last annual meeting, "Inversion of the Uterus," which elicited a very interesting discussion, after which it was referred to the publishing committee.

Dr. Taylor, from the committee to whom was referred the subject of vaccination, reported that if vaccination can by any means become general, the loathsome, disgusting, and often fatal disease—the small pox, would be effectually eradicated from the land. The committee believe, however, that an action of the society would be inadequate to insure such a result. It is believed the small pox is more generally prevalent in this State at the present time, than at any former period since the introduction of vaccination; and this is owing in a great measure to neglect on the part of the public as to vaccination, and perhaps to some extent to the imperfect manner in which vaccination is performed. The committee recommend that application be made to the legislature for the passage of a law which shall authorize and empower the trustees of each of the several school districts in the State, to exclude from the benefits of public instruction, all who have not been vaccinated. A resolution directing the appointment of a committee to obtain the passage of a law by the present legislature in conformity to the plan above suggested was offered.

The report of the committee was accepted, and the resolution adopted.

Dr. Thompson moved that a special committee be appointed, to which shall be referred so much of the president's address, as relates to the conferring of the second degree. Adopted, and Drs. Howard Townsend, Alexander Thompson and Thomas W. Blatchford, were appointed such committee.

The committee reported that the use of the assembly chamber had been granted to the society, for the delivery of the president's address, and that the governor and other State officers, and the members of the legislature had been invited to attend. *Recess until three o'clock.*

AFTERNOON SESSION.

The society re-convened at three o'clock.

Dr. Bly presented to the society an Artificial Leg, and explained its mechanism.

Dr. Bacon read a paper on "Facial Paralysis." Referred to publishing committee.

Dr. Foster, of New York, offered the following:—

Whereas, it has ever been the pride and glory of the medical profession that its functions are not limited to the cure, but extend also to the prevention of disease; and whereas, the causes of disease among crowded populations, are, to a great extent, under control, and susceptible of being avoided or removed by judicious sanitary regulations, as has been abundantly demonstrated in many instances where such measures have effected great reduction in the bills of mortality; and whereas, the first object of every civilised government should be to protect the health and lives of the citizens, therefore,

Resolved, that this society has seen with great satisfaction the progress which the science of public hygiene has made in the good opinion of the public, and looks forward to the time when, under the direction of those skilled in this branch of medical science, the ratio may be reduced to a minimum.

Resolved, that this society warmly approves the action of his honor, the mayor of the city of New York, in his efforts to place the control of the sanitary affairs of that city in the hands of medical men, who alone are competent to exercise it.

Resolved, that the legislature of the State are called upon by every motive of policy and humanity to sustain and promote all such laudable attempts to improve the health and save the lives of the community by the passage of such laws as may be necessary to give them immediate efficiency.

The resolutions were adopted.

Dr. Howard Townsend, of Albany, read a paper on "Hypophosphites." Referred to the publishing committee.

Dr. John Ball, of Brooklyn, read a paper on a case of "Hydrops Sacculi Lachrymalis." Referred to the publishing committee.

Dr. James Lee, of Saratoga county, presented a report of "the diseases of the county of Saratoga." Referred to the publishing committee.

Dr. Parker, of New York, made an oral report on "Obstetrics," and requested the members of the society to furnish him statistical information.

Dr. S. H. French, of Broome county, expressed himself gratified with the remarks of Dr. Parker.

Dr. Seth Shove, of Westchester county, presented a "Biographical sketch of Dr. George C. French, of Westchester county, prepared and read before the Westchester county medical society. Referred to publishing committee.

Dr. Horace Willard, of Albany county, read a paper on "Rupture of the Cul de Sac of the Colon." Referred to the publishing committee.

Dr. Bissell, of Utica, presented a paper on "Misplacement of the Uterus," which was referred to the publishing committee.

The society then adjourned until ten o'clock, Thursday morning.

THIRD DAY.

The society re-convened at ten o'clock Thursday morning. Minutes read and approved.

Dr. J. S. Sprague, from the committee on so much of the president's address as relates to the re-publication of such of the transactions of the society, as are not in circulation, reported in favor of the re-publication of the addresses of the president's of the society, for the first twenty-five years of its existence. Report accepted.

Dr. F. H. Hamilton presented the following papers: "Statistics of 758 Obstetrical Cases," by Dr. N. C. Husted, of the New York Academy of Medicine;

also, "Death Rate in the State of New York, according to the last Census," by Dr. Stephen Smith, of the Academy. Referred to the publishing committee.

Dr. Goodrich, of Brooklyn, submitted a paper on "Vital Statistics of the city of Brooklyn. Referred to the publishing committee.

Dr. Wynn, of New York, moved that the county medical societies be requested to furnish the next annual meeting of the State medical society with a complete list, so far as the facts can be ascertained, of the number of their members in each year, and of those who have died, together with the ages at which death took place. Adopted.

Dr. Wynn, of New York, made a very interesting statement to the society, on the subject of mortality in the United States, and the mortality on account of Intemperance.

Dr. Edward Duffy, of Albany, was invited to take a seat with the members of the society.

Dr. B. P. Staats, of Albany, moved that the publishing committee cause as many as may be practicable, of the addresses of former presidents of this society (which have not already been published,) to be published in the transactions of this society. Adopted.

Dr. Bissell, of Utica, moved that the committee on Statistics be continued, and that the legislature be requested to publish the usual number of blanks. Adopted.

Dr. Hamilton, of Buffalo, moved that in the law enacted in the legislature of this State, during the session of 1857, permitting both parties to testify in all civil suits, our profession, in common, perhaps, with the public generally, have an important interest; and that we therefore earnestly recommend to the several members of the senate and assembly from their respective districts, that they resist all attempts for its repeal; unless, indeed, it is fully proven that such repeal is demanded by the public good, whose interest ought certainly to be considered as paramount to the interest of individuals or classes. Adopted.

Dr. Goodrich moved the appointment of a committee of three to inquire into the subject of Anesthetic agency, in regard to its origin and its first introduction into medical and surgical practice in the United States, and that the committee report all facts in the premises, of interest to the medical profession, and report at the next annual meeting. Adopted, 12 to 14, and Drs. Goodrich, Jones and F. H. Hamilton were appointed such committee.

Dr. B. P. Staats, of Albany, called attention to the fact, that at the last meeting of the society, the physicians of Warren or Essex counties were requested to investigate the case of the woman, who, it was alleged lived without eating.

Several gentlemen stated that it had been pretty well demonstrated that the case was an imposition.

Dr. Ferguson, however, expressed an opposite opinion, and gave an account of his visit to the woman in question.

The subject was then dropped.

Dr. Mundy, of Staten Island, offered a resolution, that, in the opinion of this

society, a Quarantine establishment, the object of which is to prevent the introduction of foreign pestilential and infectious diseases, should, in order to obtain the object desired, be located in an isolated place, and an institution of this character, situated in the midst of a dense population and near large cities, and where there is constant interchange and communication between such place, and the places which it is designed to protect, fails to answer the purposes for which it was established. Laid on the table.

Dr. Cotes, of Genessee county, moved that a committee be appointed to report at the next meeting, the best method for securing the appointment of a "Commission of Lunacy" for the State of New York. Adopted, and Drs. Cotes, Coventry, Gray and Cook were appointed such committee.

Dr. J. V. P. Quackenbush, of Albany, treasurer, reported the receipts for the year, to have been \$143.39, and the expenditures \$88.49, leaving a balance in the hands of the treasurer of \$54.80. Report accepted and referred to the usual committee, consisting of Drs. Sprague, Barnett and Sanders, to examine the accounts.

Dr. Thompson, of Cayuga, offered a resolution that the committee to whom was referred so much of the president's address as relates to the institution of the second degree in the medical profession, be authorized to present the subject to the convention of Professors, to be held at Louisville, Ky., in May next, as it may think proper. Adopted.

Dr. Saunders, of Onondaga, moved the appointment of a committee of three, to take into consideration the propriety of condensing, in such a manner the forms for the Registration of Medical and Surgical Statistics, for the use of county practitioners—as will ensure a better attention to the subject, and to report at the next annual meeting. Adopted, and Drs. Saunders, Orlin, and Cogswell appointed such committee.

The committee to examine the treasurer's report, reported they had discharged that duty, and found the same correct.

The society then proceeded to an election of officers for the ensuing year, Drs. Sanders and Burton acting as Tellers.

The following officers were elected:—

President—PROF. H. FORDYCK BARKER, New York city. *Vice President*—DR. DANIEL T. JONES, Onondaga. *Secretary*—DR. SYLVESTER D. WILLARD, Albany. *Treasurer*—DR. JOHN V. P. QUACKENBUSH, Albany.

Permanent Members—Drs. Franklin Tuthill, Horace K. Willard, Seth Rhove, Uriah Potter, Henry N. Porter, C. M. Crandall, A. J. Dallas, P. H. Strong, John Ball, M. C. Hasbrouck, James P. Boyd, E. L. Allen, John Putnam, Stephen Hagadorn, J. F. Trowbridge, H. M. Conger.

Committee of Publication—S. D. Willard, Howard Townsend, A. H. Hoff.

To be recommended to the Regents of the University for the honorary degree of doctor of medicine—Drs. B. P. Staats, of Albany; M. H. Cash, of Orange; J. M. Sturdevant, of Oneida; Richard Lanning, of Tompkins.

For Honorary Members—Drs. Elias Durkee, of Boston; John M. De La Mater, of Ohio.

Nominated for Honorary Members—Drs. Ernest Hart, London, England; John Jeffries, Boston; Henry Bronson, New Haven; G. Mendenhall, Ohio; W. Fraser, Montreal; Chas. I. Isaacs, U. S. N. *Censors*. *First District*—John Ball, Peter Van Buren, John McNulty. *Second District*—J. E. Sprague, S. H. French, George Barr. *Third District*—B. B. Staats, T. W. Hatchford, P. McNaughton. *Fourth District*—Alexander Thompson, G. W. Burwell, A. Van Dyck.

Delegates to the American medical association left to be designated on application to the secretary.

Dr. Staats offered a resolution tendering a vote of thanks to the president for the impartial manner in which he had discharged the duties of his office.

A vote of thanks was extended also to the common council of the city of Albany for the use of their chamber.

The president, Dr. Brinsmade, then addressed the society in a few parting words, as follows:—

GENTLEMEN:—In retiring from this Chair, the duties of which I have so imperfectly performed, I should do injustice to my feelings should I not most heartily thank you over and over for the assistance, courtesies and kindness I have received from you all, and which will always be remembered with great pleasure. I hope you may all return to your homes, and ordinary arduous, but honorable duties, and have pleasant remembrances of this meeting,

The society then adjourned *sine die*.

Editorial.

NEW YORK STATE MEDICAL SOCIETY.—We are enabled to present to our readers this month, a very full report of the proceedings of this society, as published in the Albany Atlas. It convened on Tuesday, the 1st of February, and continued its sittings three days. Thirty-seven counties were represented; one hundred and fifty members were in attendance. On Wednesday evening, the annual address was delivered at the Capitol in the Assembly Chamber, by Dr. Thomas C. Brinsmade, "upon the advantages arising from medical associations." He handled the subject in a masterly manner, and it was evident he had given it much study and thought; it was listened to with marked attention, and was spoken of as able, interesting and instructive. After the address was concluded the members visited the executive mansion, and received the hospitalities of the Governor.

By an examination of the minutes it will be seen that the society transacted a very large amount of business, and the proceedings which will be published as soon as the committee having this labor in charge can make them ready, will form an interesting and important volume. The reports and essays it will contain are from the most intelligent and able men of the State, and will be a valuable acquisition to the medical literature of the country.

In point of numbers and influence this is the most important State organization in our country, and the very full attendance of its members—the numerous essays and reports, are a very satisfactory and commendable evidence of the pride the physicians of this State feel in its growth, position, and of its importance to them as a profession.

The PRIZE ESSAY ON SCARLET FEVER was awarded to Dr. Carrington, of Hyde Park, Dutchess county.

The committee on vaccination state that: "it is believed that small pox is more prevalent in this State at the present time, than at any former period

since the introduction of vaccination," and recommend that children be excluded from privileges of public instruction unless vaccinated; reducing the matter to a school district organization, and vesting the responsibility with the trustees of each school district, which certainly ought fully to overcome the evil complained of.

DEATH OF PROFESSOR TULLY, OF SPRINGFIELD, MASS.—It is with deep regret we announce the death of this distinguished man. The profession has lost one of its brightest ornaments; science one of its most valuable contributors, and ourselves a warm friend. Dr. Church writes us: "his illness was short. Ten days ago he had a call on to the Green Mountains, some thirty-five or forty miles, and his illness was attributable to the journey he took in obedience to that call." He died on Monday, February 28, at 9 o'clock A. M., his funeral will take place on Friday, March 4, at 10 o'clock A. M., and his remains are to be taken to New Haven, Conn., for interment.

Correspondents will oblige by writing plainly their names, town, county and state. We have, in several instances, been unable to answer letters because these are omitted.

Pharmacy.

THE ACTION AND USES OF DIGITALINE.

MM. Homolle and Quevenne have stated, as the result of their experience, that, in doses of one seventy-fifth of a grain, given three times a day, this substance acts as a diuretic in general dropsy, and with great speed and efficacy in reducing the effusion; and that it is not rendered more certain by any material increase of the dose. They further found that, in about double this dose, and sometimes in the same dose, it reduces greatly the frequency of the heart's action; and that the dose cannot reach the one-twelfth of a grain without producing nausea and symptoms of incipient poisoning. Dr. Christison, in the *Monthly Journal of Medical Science*, January, 1855, gives us the results of his experience of its use. He believes it to be an energetic diuretic and sedative. His first two trials of it were made in cases of extensive renal anasarca. In one case, diuresis commenced towards the close of the second day, and in the other a day later; in both the flow was profuse, and the oedema entirely disappeared. He commends strongly the use of such diuretics as digitalis, squill, and bi-tartrate of potash, in renal dropsy. He has not found them, except in one instance, increase the albumen in the urine; and believes they have been shunned on grounds purely theoretical and baseless. It is the same with digitaline. In the first of the two patients, the albumen quickly and greatly diminished; in both it disappeared at last, but in one, after some days, reappeared, but in diminished proportion. In one instance, great depression of the heart's action was brought on, instead of a flow of urine. He thinks it very likely that the diuretic and sedative actions do not concur. He gave it in the doses recommended by Homolle and Quevenne.—*Association Med. Journal*, June 15, 1855, p. 565.

NEW FORM OF ASTRINGENT APPLICATION.

By Dr. Wm. Bayes, Brighton.

Pure glycerine dissolves nearly its own weight of tannin, affording a very powerful local astringent application.

The solution of tannin in pure glycerine appears to me to supply a desideratum long felt, and capable of a great variety of useful applications.

The solvent property of glycerine over tannin allows us to form a lotion of any desirable strength, as the solution is readily miscible with water.

The solution of tannin in glycerine, in one or other of its strengths, is peculiarly applicable to many disorders of the mucous membrane, readily combining with mucous, and forming a non-evaporisable coating over dry membranes; hence it may with benefit be applied to the mucous membranes of the eye and ear in many of its diseased conditions. It forms a most convenient application to the vaginal, uterine, urethral, or rectal membranes, where a strong and non-irritant astringent lotion is desired.

In local hemorrhages, where the bleeding surface can easily be reached, it will prove very convenient, and may be applied either with a sponge or small brush.

The solution must be kept in the dark, and should not be prepared for any great length of time before used, or decomposition will occur.

It is singular that glycerine does not possess the same property towards gallic acid.—*Association Med. Journal*, Sep. 29, 1854, p. 885.

DRAGEES OF TAR.

This substance has long enjoyed a reputation as a valuable therapeutic agent, as a topical remedy, also as an active remedy in some urinary disorders. For the latter purpose it has usually been employed in the form of a solution in water. In this form of exhibition we are able to obtain but a minute portion of its active principles, at the most not to exceed fourteen centigrammes to the litre of water. M. Dannecy (pharmacien) has recently overcome the difficulties encountered in the way of its exhibition as an internal medicament by combining it with magnesia. The *Gazette Hebdomadaire*, July 23d, gives us the formula for their preparation, as follows:—

Take of cold Norwegian tar *ad lib.*, and add to it one-fifteenth its weight of calcined magnesia. After mixing, leave the substances to react upon themselves for five hours, in a cool place, as a cellar. The mixture, at this time, becomes easily manipulated, and may be formed into dragées or other convenient forms, and, when covered with sugar aromatized, is divested of the repugnant qualities it previously possessed.

Since this method has been devised several physicians have advantageously combined iron or quinine, as the condition of the patient may indicate; the mixture is not incompatible with either.

CREAM SYRUPS.

This class of syrups has not depreciated in public favor, when dispensed of good quality. But the speedy decomposition which the cream is liable to undergo, and the trouble of procuring it at all times, is a difficulty which it is desirable to remedy by offering a substitute. Below is a recipe for Cream Syrup which has gained no little celebrity:—

Take of Ol. amygd. dulcis (recent).....	2 f. oz.
Pv. gum acaciæ.....	2 oz.
Aquæ fontanæ.....	9 ol.

M. ft. emulsio, et adde, albumen ovi, No. 2, sacch. albi, 1 lb.

M. Dissolve sugar by gentle heat, and strain; fill small bottles and keep in a cool place well corked. This preparation is easily made in a few minutes, and will keep for a long time. For use, mix one part with eight of any of the ordinary syrups, or about a drachm to each glass. It forms an unequalled orgeat by mixing two drachms or more with an ounce of simple syrup, and flavor with a mixture of bitter almond and orange-flower water.

COLLODION AND CASTOR-OIL AS AN ARTIFICIAL CUTICLE.

The mixture has been used of late with success in King's College Hospital, as an application to burns and abrasions, to form a sort of artificial cuticle. It has been used at the suggestion of Dr. Savage, at the Samaritan Hospital, in two cases of vesico-vaginal fistula, now there under the care of Mr. Spencer Wells. In one of these cases there is a recto-vaginal fistula also. In both the excoriation of the labia, perinium, and thighs, from the constant dribbling of urine and the consequent smarting, has been very distressing. Extreme cleanliness, careful drying of the parts, and the use of simple ointment, afforded but little relief. The mixture of one part of collodion to two parts of castor-oil was therefore used, and gave the most marked relief. It causes some smarting for a few minutes after its application, but it then forms a smooth elastic coating or varnish, which resists the action of the urine for many hours, and effectually protects the excoriated skin from the irritating fluid.—*Medical Times and Gaz.* Jan. 30, 1858, p. 119.

A NEW PREPARATION OF SUPERPHOSPHATE OF IRON AND LIME.

By Dr. Routh.

This is prepared by dissolving phosphate of iron and phosphate of lime in equal proportions in hot metaphosphoric acid, and adding sugar to the solution to make a syrup. Some years ago Dr. Routh recommended the syrup of the superphosphate of iron (elsewhere known as the biphosphate of iron) as a remedy for weakly children, and those weak adults with mental disorders. Its uses as such had been since amply proved. He now recommended this as an excellent remedy in rickets and weak children with deficient osseous development. It was very pleasant to take, and did not blacken the stools. It was prepared by Mr. Greenish, of New Street, Dorset Square. Each ounce of the syrup contained five grains of iron and five of phosphate of lime.—*Lancet*, March 6, 1858, p. 250.

EDWARD PARRISH,
No. 800 Arch Street, Philadelphia.

(Author of the "Introduction to Practical Pharmacy.")

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AND IMPORTER OF

FINE DRUGS & PREPARATIONS,

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Compound Syrup of the Phosphates of Lime, Iron, Soda and Potassa.

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This admirable tonic is adapted to supply the waste occurring during the progress of chronic diseases, and to build up the strength wasted by long continued ill health. Put up in 1 lb. bottles, at \$8 per doz., and in a smaller size, at \$2.50 per dozen.

Glycerole of the Hypophosphites,

Used in the treatment of Pulmonary Consumption, and as a tonic in cases of nervous and general debility. Sold with circulars giving its composition, uses, &c., at \$3 per dozen bottles.

SYRUP OF THE HYPOPHOSPHITES,

Similar to the foregoing, though without the use of Glycerin in its preparation. Price \$6 per doz.

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Each containing 5 grains of Sub. Carb. Iron, flavored with Vanilla, in boxes, at 1.75 per dozen.

PHOSPHATIC LOZENGES,

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PHOSPHATE OF ZINC,

A new remedy in Epilepsy and other nervous diseases. Dose 2 to 5 grains.

CITRATE OF IRON AND STRYCHNIA. Dose, 8 grains.

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An old and very celebrated Philadelphia preparation. Price 75 c. per dozen.

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RESPIRATORS, for persons with weak lungs or throat, as a filter to the air, and a preventive against cold on leaving heated rooms, and for use in foggy and damp weather. Prices—of Cork, \$1; Silver Wire, \$1.50; Gilt, \$2 each.

PESSARIES, elastic ring shaped, S. E., and horse-shoe, GUTTA PERCHA, constructed on the most approved principles, and so as to be worn for months without becoming offensive or losing their perfect surface.

Physician's Prescription Scales,

Of the best quality and accurate. We import several kinds from \$1 to \$8.50 each.

Pocket Cases for Medicines,

Containing 17 bottles, of 8 sizes, well corked, and 1 graduated glass, the whole of convenient size, and accompanied by a sheet of 48 labels, printed in bronze on steel blue paper, and ready gummed for use. Price \$2 each. Sold and sent to any part of the country, as above.

Tarrant's Effervescent Seltzer Aperient.

This valuable and popular medicine, prepared in conformity with the analysis of the water of the celebrated seltzer spring in Germany, in a most convenient and portable form, has universally received the most favorable recommendations of the medical profession and a discerning public, as the most efficient and agreeable Saline Aperient in use, and as being entitled to special preference over the many mineral spring waters, seidlitz powders, and other similar articles, both from its compactness and greater efficacy. It may be used with the best effect in all Billous and Febrile diseases, sick Headache, Loss of Appetite, Indigestion, and all similar complaints, particularly incident to the spring and summer seasons.

It is particularly adapted to the wants of travelers, by sea and land, residents in hot climates, persons of sedentary habits, invalids and convalescents, captains of vessels and planters will find it a valuable addition to their medicine chests. With those who have used it, it has high favor, and is deemed indispensable.

In a torpid state of the liver it renders great service in restoring healthy action. *In gout and rheumatism* it gives the best satisfaction, allaying all inflammatory symptoms, and in many cases effectually curing those afflicted. *Its success in cases of gravel, indigestion, heartburn, and costiveness* proves it to be a medicine of the greatest utility. *Acidity of the stomach, and the distressing sickness so usual during pregnancy* yields speedily and with marked success under its healthful influence. *It affords the greatest relief to those afflicted with, or subject to the Piles,* acting gently on the bowels, neutralizing all irritating secretions, and thereby removing all inflammatory tendencies. In fact, it is invaluable in all cases where a gentle aperient or purgative is required.

It is in the form of a powder, carefully put up in bottles, to keep in any climate, and merely requires water poured upon it to produce a delightful effervescent beverage.

Taken in the morning, it never interferes with the avocations of the day, acting gently on the system, restoring the digestive powers, exciting a healthy and vigorous tone of the stomach, and creating an elasticity of mind and flow of spirits which give zest to every enjoyment. It also enables the invalid to enjoy many luxuries with impunity, from which he must otherwise be debarred, and without which life is irksome and distressing.

Numerous testimonials from professional and other gentlemen of the highest standing throughout the country, and its steadily increasing popularity for a series of years, strongly guarantee its efficacy and valuable character, and commend it to the favorable notice of an intelligent public.

Prepared and sold wholesale and retail.

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Sanctioned by popular opinion and high authority of the most distinguished of the medical faculty. It offers to the afflicted a remedy, whose success has in every instance supported its deserved reputation. Being convenient and agreeable in its use, experience has proved that it retains in every climate its desirable and truly valuable character. It is in the form of a paste, is tasteless, and does not impair the digestion. It is prepared with the greatest possible care, upon well-tested

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**Remarks on the Influence of Climate, Soil, and Cultivation
on Medicinal Plants.**

BY CHARLES A. LEE, M. D.

SLIGHT observation is sufficient to show that the nature of the vegetation on the earth's surface is greatly influenced by climate and locality. The organization of plants proves them fitted for different soils, and different amounts of light, heat, and moisture. From the tropics to the polar circle, the Flora is constantly changing from the palms, bananas and orchids, to the larches, willows, mosses, lichens and grasses of the arctic and antarctic regions. The same is true of the lofty mountains at the equator; different heights exhibiting the different Flora of different latitudes. Organic life and vigor in the vegetable kingdom, other things being equal, seem directly proportioned to the increase of temperature. Heat, light and moisture are the efficient agents in the promotion of vegetable growth; each species of plants can bear a definite range of temperature, and each species requires for the due performance of all its functions, and the development of its products, a certain amount of heat. A plant may be said to suit a particular climate, when it not only lives and sends out leaves, but also produces flowers and seeds, and elaborates the peculiar products on which its properties depend. Plants, shrubs and trees which yield tropical spices, oils and resins, can not be expected to yield the same products in equal proportion in the temperate zones. Climate does not depend on latitude; isotherms are to be regarded. Plants, like animals, are fitted by their constitution for different climates.

GENERAL REMEDIES.

Astringents.

Tonics.

Alteratives.

Sedatives.

Narcotics.

General Stimulants.

Emollients.

LOCAL REMEDIES.

Sialagogues.

Errhines.

Diuretics.

Diaphoretics.

Cathartics.

Emetics.

Anthelmintics.

Expectorants.

Emmenagogues.

Parturients.

Chologogues.

INDIGENOUS ASTRINGENTS.

Astringents have been defined to be those substances that produce constriction or condensation in the living animal fibre. It is no explanation of their *modus operandi* to say, that they produce these effects by causing a peculiar excitement in the living contractile and irritable fibre; and yet this, perhaps, is all that is known on the subject. Headland thinks they do not necessarily act in the blood—that they do not pass from the blood to the nerves—that they do not always act by passing out of the body through the glands, but that their action is peculiar yet simple—that they act directly and especially on muscular fibre, whether of the voluntary or involuntary kind, and that they do this through the medium of the circulation. Some explain the operation of astringents on physical, others on vital principles, through the modifications exerted on the living properties and actions of the secerning vessels, thus checking redundant secretions of blood and other fluids, in virtue of that change of vital action. This dynamic effect, however, may result from vital reactions, occasioned by their chemical properties. It is certain that most astringents have the power of coagulating or precipitating albumen; and by virtue of this power to constrict many dead animal matters, as fibrinous tissues. That they are absorbed into the blood is abundantly capable of demonstration—that they may pass through the walls of the capillaries to the muscular tissue, is highly probable; and that this effect may follow independent of any influence on the nervous system, is altogether probable, as they act on living vegetables. Their chemico-dynamic action is doubtless extended to all contractile tissues, and perhaps to all the soft solids of the body, as well as the blood. Over the unstriped, involuntary mus-

cular fibres, their influence is slower and less strongly marked—but more permanent and important in its results; existing as these fibres do, in the coats of the stomach and intestines, the middle coat of arteries, the lining of the ducts of glands generally, in the substance of the heart, and the walls of capillary vessels. In large doses they prove irritant and poisonous; in small quantities they give tonicity to the capillary vessels—diminish their calibre—check hemorrhages and inordinate secretions, and give strength to muscular contractions, thus counteracting a lax state of the system, and proving remedial in certain morbid conditions.

As *styptics*, when applied to bleeding parts externally, they coagulate the blood by their chemical action on albumen and fibrine, and at the same time cause constriction by influencing the vital properties of the walls of the vessels—within the blood vessels, chemical action to any extent, is prevented by their great dilution, and the successful resistance of the same vital properties.

No class of remedies has been employed more empirically and injuriously than astringents. If prescribed without due regard to the pathological states they are designed to correct, they prove extremely hazardous, and not unfrequently are followed by fatal effects. The discharge which they are given to check is often instituted by nature for the relief of congestion, or to eliminate morbid principles from the blood, and can not be suddenly arrested with impunity. The disease is overlooked, while a symptom is mistaken for it. Hemorrhagic effusions, when not copious, are the consequences of a secreting process, instituted by morbid states, and are analagous to menstruation. Of course, in such cases, they are not to be suddenly suppressed as a matter of course; we refer more particularly to hæmatemesis, hæmoptysis, and hæmorroidal discharges, as well as diarrhea, in all its forms; leucorrhea, gonorrhea, &c. Here, nature lays the foundation of the cure in the effusion itself. Interference is only proper where it transcends the exigencies of the case, or the ability of the system to bear it.

The indirect or remote effects of astringents are, by no means, to be lost sight of by the practitioner. Besides diminished exhalation and secretion from all the mucous and serous membranes and of the skin, and the increased tonicity of muscular fibre; we find the blood accumulated in the heart and larger blood vessels, from

the diminished calibre of the smaller vessels and capillaries, in consequence of which plethora may ensue—reaction take place, with a full, hard pulse, and resulting, perhaps, in serious congestions or hemorrhages. Cerebral congestion, apoplexy and paralysis have, doubtless, resulted from such plethora, consequent on the check given to the secretions. The principal rules which should govern their internal administration are, to avoid their use in cases of febrile or inflammatory excitement; where general plethora exists; where excessive secretion is dependent on active irritation; or where there is much derangement of the digestive organs. To these rules there may be occasional exceptions, but in general they will hold good. Locally they are applied to the skin, eye, ear, mouth, fauces, larynx, urethra, rectum, vagina, &c. To secure their remote effects they are to be introduced into the stomach. Tannic and gallic acids are the chief astringent principles in vegetables; other agents, as opium and sedatives generally, may indirectly prove astringent, by allaying morbid action, though not belonging to astringents proper.

Natural Orders of Plants, Indigenous to the United States, containing Genera, having Astringent Properties.

ORDER.	GENERA.	SPECIES.	POPULAR NAMES.
Anacardiaceæ (<i>R. Brown.</i>) <i>Cashew tribe.</i>	Rhus.	R. Glabra. Typhina. Copallina. Aromatica.	Smooth Sumach. Stag Horn Sumach.
Geraniaceæ (<i>Lind.</i>) <i>Geranium tribe.</i>	Geranium.	R. Maculatum. Carolinianum Pusillum. Robertianum.	Cranesbill, or Crowfoot. Herb Robert.
Rosaceæ. (<i>Jussieu.</i>) <i>Rose tribe.</i>	1. Prunus.	P. Americana. Chicasa. Maritima.	Red Plum—Yellow Plum. Chickasaw Plum. Beach Plum—Sand Plum.
	2. Cerasus.	C. Pumila. Pennsylvanica Virginiana. Serotina. Caroliniana. Illicifolius.	Sand Cherry. Bird Cherry—Wild Red Cherry. Wild Cherry—Black Cherry. Choke Cherry.
	3. Spiraea.	S. Opulifolia. Corymbosa. Salicifolia. Tomentosa. Lobata.	Nine-bark. Queen of the Meadow. } Meadow Sweet. } Hard-hack.
	4. Agrimonia.	A. Eupatoria.	Agrimony.

ORDER.	GENERA.	SPECIES.	POPULAR NAMES.
Rosaceæ. (<i>Rosaceæ</i> .)	5. Geum.	G. Rivale. Strictum. Virginianum.	Water Avens. Yellow Avens. White Avens.
	6. Fragaria.	F. Virginiana. Vesca. Chilensis.	Wild Strawberry, <i>Scarlet</i> . Alpine, or Wood Strawberry. Chili Strawberry.
	7. Potentilla.	P. Norwegica. Tridentata. Canadensis. Argentea. Fruticosa. Anserina, &c.	Cinquefoil. Mountain Potentilla. Common Cinquefoil. Silvery " Shrubby " Goose Grass.
	8. Sanguis'ba.	S. Canadensis.	American Great Burnet.
	9. Rubus.	R. Villosus. Hispidus. Canadensis. Cuneifolius. Odoratus. Strigosus. Triflorus.	High Blackberry. Bristly " Low " Wedge-leaved Blackberry. Flowering Raspberry. Red Wild " Dwarf "
	10. Rosa.	R. Lucida. Nitida. Blanda. Setigera, &c.	Wild Rose. Shining Rose. Bland " Michigan "
Ericaceæ. (<i>Heathacortæ</i> .)	1. Vaccinium.	V. Resinosum. Corymbosum. Virgatum. Pennsylvanum.	Black Whortleberry. Blue Bilberry. Blue Whortleberry. Com. Low Blueberry.
	2. Arbutus.	A. Uva Ursi.	Bearberry.
	3. Andromeda.	A. Calyculata. Polyfolia. Racemosa. Arborea.	Bracted Cassandria. Wild Rosemary. Clustered Zenobia. Sorrel Tree.
	4. Clethra.	C. Alnifolia.	Sweet Pepper Bush, or White Alder.
	5. Epigaea.	E. Repens.	Trailing Arbutus.
	6. Ledum.	L. Palustre.	Labrador Tea.
	7. Chimaphila.	C. Umbellata. Maculata.	Princes Pine—Pipsisa. Spotted Wintergreen.
	8. Monotropa.	M. Uniflora.	Indian Pipe.
Aquifoliaceæ. (<i>Hollyworts</i> .)	1. Prinos.	P. Verticillatus. Glaber.	Black Alder, or Winterberry. Ink Berry.
	1. Diospyros.	D. Virginiana.	Persimmon Tree.
Ebenaceæ. (<i>Ebonads</i> .)			

ORDER.	GENERA.	SPECIES.	POPULAR NAMES.
Plumbaginææ (<i>Leadworts.</i>)	1. Statice	S. Limonum.	Marsh Rosemary.
Orobancha'æ (<i>Broomrapes.</i>)	1. Orobanche.	O. Uniflora.	One flowered Broomrape.
		American.	Squaw root—Caneer root.
	2. Epiphegus.	E. Virginiana.	Beech Drops, " "
Hamamelaceæ	1 Hamamelis.	H. Virginica.	Witch Hazel.
Oupuliferæ. (<i>Mastworts.</i>)	1 Quercus.	Q. Alba.	White Oak.
		Macrocarpa.	Overcup "
		Stellata.	Iron "
		Olivaeformis.	Mossy-cup Oak.
		Rubra.	Red "
		Tinctoria.	Black "
		Coccinea.	Scarlet "
		Elongata, &c.	Spanish "
	2. Castanea.	C. Vesca.	Chestnut.
		Pumilla.	Dwarf Chestnut.
	3. Corylus.	C. Americana.	Hazel Nut.
		Rostrata.	Beaked Hazel.
	4. Fagus.	F. Sylvatica.	White Beech.
		Americana.	
Myricææ.	1. Myrica.	M. Gale.	Sweet Gale.
		Cerifera.	Bayberry—Wax Myrtle.
	2. Comptonia.	C. Asplenifolia.	Sweet Fern.
Salicaceæ. (<i>Willowworts.</i>)	1. Salix.	S. Tristis.	Sage Willow.
		Candida.	White "
		Nigra.	Black "
		Prinoides.	Prinos leaved Willow.
		Grisea.	Grey "
Saxifragaceæ. (<i>Saxifrages.</i>)	Heuchera.	H. Americana.	Alum Root.
		Pubescens.	
Lythraceæ. (<i>Loose Stripes.</i>)	Lythrum.	L. Salicaria.	Loose Strife.
Nymphæaceæ (<i>Water Lilies.</i>)	1. Nymphaea.	N. Odorata.	Water Lily.
	2. Nuphar.	N. Advena.	Yellow Pond Lilly.
Cabombaceæ. (<i>Water Shields.</i>)	Brasenia.	B. Peltata.	Water Target.
Hypericaceæ. (<i>St. John's Worts.</i>)	Hynericum	H. Perforatum.	St. John's Wort.
		Corymbosum	Spotted "
		Canadense.	Canadian "
Hippocasta'æ [<i>Buck Eyes.</i>]	1. Aesculus.	A. Glabra.	Ohio Buckeye.
		Flava.	Big "
		Pavia.	Small "
Rhamnaceæ. (<i>Buckthorns.</i>)	Ceanothus.	C. Americanus.	Jersey Tea—Red Root.
		C. Ovalla.	Oval leaved Ceanothus.

ORDER.	GENERA.	SPECIES.	POPULAR NAMES.
Leguminosæ (<i>Leguminous p's.</i>)	1. Hæmatox.	H. Campeach.	Logwood.
Ranunculac'æ (<i>Crowfoots.</i>)	Hepatica.	H. Triloba.	Liverwort.
Cistacæ. (<i>Rock-Roses.</i>)	Helianthem'm	H. Canadense.	Frost plant—Rock Rose.
Berberidacæ [<i>Berberida</i>]	Berberis.	B. Vulgaris.	Barberry Bush (fruit.)
Ulmacæ. [<i>Elm Worts.</i>]	Ulmus.	U. Americana. Fulva. Racemosa.	American Elm (bark.) Slippery Elm " Cork "
Conifercæ. [<i>Conifers.</i>]	Abies.	A. Canadensis.	Hemlock (bark.)
	Pinus.	P. Rigida. Resinosa. Variabilis.	Pitch pine, (oleo resin.) Norway pine, " Yellow " "
Labiatæ. [<i>Labiato plants</i>]	1. Collinsonia.	C. Canadensis.	Horse Balm—Rich weed
	2. Lycopus.	L. Virginicus.	Bugle Weed.
Trilliacæ. [<i>Trilliads.</i>]	Trillium.	T. Pendulum. Cernuum. Erectum.	Drooping Trillium. Beth Root—Birth Root. " " Wake Robin.
Polygonacæ. [<i>Buckwheats.</i>]	Rumex.	R. Crispus. Aquaticus. Sanguineus. Britannica. Obtusifolius.	Yellow Dock. Water " Bloody Veined Dock. British Water Dock. Blunt leaved Dock.
	Polygonum.	P. Avicularé.	Knot Grass.
Compositæ. [<i>Asterworts.</i>]	Erigeron.	E. Canadense. Bellidifolium. Philadelphicu. Strygosum. American.	Common Flea Bane. Poor Robin's Plantain. Philadelphia Flea Bane. White Weed. Sweet Scabious Daisy.
	Solidago.	S. Virga Aurea. Odora.	Common Golden Root. Sweet Scented "
Oleacæ. [<i>Olive tribe.</i>]	Ligustrum.	L. Vulgare.	Common Privet. (Bark and Leaves.)
Boraginacæ. [<i>Borage tribe.</i>]	Pulmonaria.	1. P. Virginica.	Virginia Lungwort.
	Cynoglossum.	2. C. Officinale.	Wild Comfrey.

ORDER.	GENERA.	SPECIES.	POPULAR NAMES.
Umbelliferae [<i>Umbellif. tribe.</i>]	Cornus.	C. Florida. Alternifolia. Circinata. Sericea.	Dogwood. Alternate leaved Dogwood. Round " " Swamp
Crassulaceae. [<i>House leek tribe</i>]	Sedum.	S. Ternatum.	Stone crop " " House Leek.
Compositae.	Cnicus.	C. Lanceolatum. Altissimum. Virginianum.	Thistle, common.
	Onopordon.	O. Acanthium.	Cotton Thistle.

Such are the principal natural orders and genera, including species of plants possessing astringent properties, indigenous to our country. There are some others, but of too little consequence to need particular mention; some of them combine other valuable properties with astringent, as the different species of cornus, ulmus, rumex, &c. Those in which a tonic principle predominates, will be classified hereafter. The above list, which might be considerably extended, will show, that however deficient our native materia medica may be in some classes of medicines, yet, that it abounds in those plants possessing astringency, and to such extent, that we may be wholly independent of foreign countries for our supply of articles of this class. In nearly all the above named articles the astringency is evidently due to tannic and gallic acids; although these are not claimed as the only astringent matters in the vegetable kingdom, for we find that some of the alkaloids, neutrals, resinoids, oleo-resins, &c., have also a styptic power as, *quinia*, *cinchonia*, *strychnia*, *cornu*, *gentianin*, *geranin*, *hematoxylin*, *myricin*, *prunin*, *ergotin*, *turpentine*, &c. We are not, however, to confound all medicaments that restrain fluxes, with true astringents; for in that case, blood-letting, demulcents, narcotics, sedatives, revulsives, &c., would belong to that class. The per centage of tannic acid yielded by our different astringent plants varies extremely—from 2 to 40 per cent. or more. Thus our common elm bark has about 6 per cent.; inner bark of white oak, 26; uva ursi, 36; marsh rosemary, 15; pomegranate, 18; sumach, 16 to 25; sweet fern, 30; willow, 8 to 10 per cent, &c. It is to be recollected that astringent barks, roots, &c., are to be collected in the spring, as they contain a much larger amount of tannin at that season than at any other.

Krameria Triandra.

(*Rhatany.*)

WE are indebted to Ruiz, an eminent Spanish botanist, for our acquaintance with this remedy. He discovered its medical properties in 1784, but he did not publish the results of his experiments till 1796, and his work, inserted in the memoirs of the Royal Academy of Madrid, was translated in 1808; soon after the attention of other European practitioners had been called to the astringent qualities of the drug.

Physiological action of Rhatany.—Taken in small doses the extract of rhatany produces in the region of the stomach a distressing sense of heaviness, and oftentimes of sharp, cutting pains; digestion is more difficult and constipation ensues almost immediately. A short time after the exhibition of this remedy, the patient experiences a general uneasiness, slightly pronounced when the rhatany has been given to a man in health; very marked, on the contrary, when it has been administered for the arrest of hemorrhage, and when the therapeutic end has been attained. This uneasiness manifests itself especially by yawnings, by great efforts at respiration, and by very painful constrictions of the chest. These effects are common to tannin, to kino, to catechu, in fact to all substances that contain a large proportion of tannin.

Therapeutic action of Rhatany.—The extract of rhatany has formed a special use in the treatment of severe hemorrhages, being one of the most powerful hemostatics we possess. It is employed likewise, under the same circumstances as tannin; chronic diarrheas, chronic pulmonary catarrhs, uterine, vaginal, urethral, &c.; topically, in atonic ulcers, on relaxed tissues, such as the inguinal ring in hernia, in the *naevi materni*, in chronic oedema.

Rhatany has been highly lauded as a remedy in hemorrhages of an atonic character, when the blood flows away from the small vessels, because the tissues of which they form a part, have undergone a feeble degeneration, or are the seat of a congestion which holds them in a state of tumefaction, and when the relaxed, dilated vascular orifices offer less hindrance to the passage of the fluid than they receive. Its styptic influence has arrested the flow of blood in hemoptysis, epistaxis, hematuria, dysentery, uterine flooding, &c.

It is recommended in cardialgia and nervous irritability, in connection with a camphorated mixture in typhus fever, in fluor albus and menorrhagia. When taken into the stomach it tinges the fecal evacuations of a red color, which coloration remains two, sometimes three days, and even more after the patient has ceased taking it. It does not materially affect the color of the urine, though it diminishes the quantity of the secretion. The impression that the substance makes on the buccal cavity shows a very marked tonic property and this impression is continued throughout the entire digestive duct. Wherever it is desired to effect the contraction of the tissues of an organ, to arouse or increase the tone, the vigor of the tissues, to combat atony or relaxation of any surface or organic apparatus, the use of this agent can be resorted to with confidence.

In inflammation of the buccal membrane provoked by the use of mercury, in certain ulcerated forms of inflammation of the gums, for moderating and reducing the pain in ulcerations of the mucous membranes, and as an application to burns, ulcers and blisters on the skin, rhatany effects a decrease of pain with a marvellous rapidity.

Excellent results have been experienced from its employment in hemorrhoidal and dysenteric tenesmus. In these cases, after each evacuation, the patient should raise himself from his seat, resisting the efforts of expulsion and make immediate application of a lotion, or a tolerably free injection of a weak infusion of rhatany.

That a substance which makes so lively a styptic impression on the organs, should arrest morbid evacuations, bloody discharges, is a result not at all surprising when its effects on the living tissue are understood. Rhatany always excites a contraction of unnaturally dilated openings in the tissues: its characteristic action is that of dissipating bloody congestions, when it exists on a surface and when the old, permanent congestion has brought about an atony of the capillary vessels. In this way it is able to decide the cicatrization of superficial ulcers. An hemorrhage is always a symptomatic phenomenon, and it is to the lesions which occasion the passage of the blood out of the canals that attention must be directed before determining whether this should be the remedy used. It is certain that the effect of this substance will not be favorable, when the bloody or humoral evacuations are occasioned by a violent

inflammation of the parts which furnish them ; or, indeed, when the hemorrhages are supported by a superabundance of blood or a state of plethora. It is as contrary to the pharmacologic doctrine as to the results of experience, to believe that this agent can never do harm—that its use is never restrained by the prospect of troublesome results. The danger offered to the employment of any remedy, badly applied, prescribed at an improper time, is in proportion always to its therapeutic energy.

In softening of the tissues of the heart, in the dilatations of the ventricles of this viscus, this agent can be employed with confidence. These lesions are very frequent and produce numerous symptoms. When there is no immediate irritation of this organ and no inflammation, the daily use of rhatany is beneficial. The repeated impression of the molecules of this substance on the tissues of the heart, corrects its morbid softness, produces a contraction of the fibres which compose it, tending continually to bring back the dimensions to the natural size. With the same intention and with like effect it can be given in hemoptysis, provoked by a soft degeneration of the pulmonary tissue.

When rhatany is administered in cases of looseness, diarrhea and the like, and when there is any irritation or inflammation in the intestinal canal, it produces, after ingestion, a sense of heat in the epigastrium, and in the abdomen, which spreads to the sides of the body and even to the limbs. The throat, the tongue, the mouth become dry ; there is thirst, cardialgia, vomiting, distress in the intestines, flatulence, cholic, &c. : the evacuations become more abundant. If the irritation and inflammation are moderate, if they are of considerable continuance, these accidental effects are appeased after a few doses of the substance. The morbid symptoms that previously existed become less violent ; after an apparent augmentation of the malady, there is a decided improvement in the symptoms. There are fewer evacuations, the stools are less liquid, they become thicker, and lose their fetidity ; there is more heat at the anus in evacuation, the cholic subsides, the belly is supple, the strength increases, there is more appetite, the complexion brightens, it is evident that the rhatany has proved salutary. There is no need of anxiety by the effects produced on the first administration of rhatany. This substance, in order to bring up the intestinal tissues to their normal condition, has to combat and subdue the lesions with which it is affected.

M. Soubeiran made in 1834 an examination of this root, which he published in the *Jour. de Pharm.*, in which he says:—

“Vogel, Gmelin, Peschier and Tromsdorff, examined this root, and if some points connected with its analysis are not completely elucidated, yet its chemico medical history has been fully developed. Rhatany contains tannin in three states:—1st. Pure; in which case it is colorless, and possesses all its peculiar properties. 2d. In a state insoluble in water, resulting from the alteration of the tannin by contact with the air; in this state it has lost its solubility and astringency. 3d. In the form of extractive, this is a soluble combination of pure tannin with No. 2, and gives to the fluid preparations of rhatany their characteristic red brown color. This root also contains a small proportion of gum, a little fecula, some saccharine matter, and an acid whose properties are not yet fully determined.”

The analyses referred to are imperfect and conflicting. In some cases the root was used, in others the watery extract, and again the bark of the root; confusion arises where comparison is made, because the classification of the elements is not the same in each report. The tannic and gallic acids being included in the coloring matter and given as tannin, while in the annexed analysis we give all the constituent elements separately, and shall refer to the particulars at another time.

ANALYSIS OF RHATANY.

Organic matter,	-	-	-	-	98.60
Inorganic “	-	-	-	-	6.40
					<hr/>
					100
Gum and Albumen,	-	-	-	-	1.257
Sugar,	-	-	-	-	0.285
Extractive matter,	-	-	-	-	0.628
Starch,	-	-	-	-	1.064
Tannin,	-	-	-	-	8.928
Coloring matter, (Resin)	-	-	-	-	20.578
Soluble Salts,	-	-	-	-	0.878
Insoluble “	-	-	-	-	5.428
Lignin, etc.	-	-	-	-	65.954
					<hr/>
					100.000

Frasera Carolinensis.*—(*Frasera Walteri.*)(American Columbo.)*

BY H. G. LUNGREEN, M. D., FRANKLIN, N. C.

I wish to call the attention of the profession to the virtues of this plant; it has not received that attention from medical teachers and writers upon materia medica to which its virtues entitle it.

It is a beautiful and stately plant, growing west of the Alleghanies, in the middle and southern states, on the border of lakes and in rich soils; its peculiar habitat, however, is variously described by various botanists. It is found abundantly in the western part of North Carolina, upper part of Georgia, and eastern Tennessee.

It is one of the tallest of our native herbaceous plants, growing from three to eight feet high; is one of the first which appears in the spring—flowers in June and July; which, however, together with the stems are produced only in the third year, the radical leaves being the only part of the plant which previously appear above ground; it deserves cultivation, if not for its medicinal properties at least as an ornament to our gardens. The generic name of *Frasera* was bestowed upon it by Walter, in commemoration of Mr. John Fraser, a botanical collector, to whose industry and exertions the gardens of England were indebted for numbers of rare plants.

The roots are large and fleshy; in drying it shrinks very much. The experiments I have frequently made in this respect, give upon an average eighteen or twenty ounces of dried to five pounds of green root. When collected the roots should be cut into transverse slices and dried rapidly in a drying room or in the sun; otherwise in a partially dried state, in damp weather it rapidly absorbs moisture and moulds, losing its rich yellow color, and imparting its properties, as is the case with many of our native articles of the vegetable materia medica. Much diversity of opinion appears to have existed as to the value of the medicinal properties of this plant—by some considered equal, if not superior to the foreign columbo, while others considered it of little utility; although regarded by them as inferior in bitterness and tonic properties to the foreign; it was acknowledged as an

efficacious bitter, capable of producing the usual effects of this class of remedies when properly administered; and much allowance must be made for the opinions concerning its properties, as we are not informed whether in the experiments named it was used in the recent or dried state, for it should be noticed that its tonic properties are only developed when the root has been perfectly dried. In the recent state it proves both emetic and cathartic.

Dr. Zollickoffer states "as far as my experience goes, I am able to speak in favor of its medicinal operation. In several cases of a relaxed state of the stomach and bowels in which I have prescribed it, I have found it competent to restore the appetite and increase the digestive powers very considerably."

Dr. Hildreth, of Ohio, states "that from the experiments he has made with it, he is induced to believe it fully equal, if not superior to the imported, and mentions a case of gangreen of the lower extremities, in which it had proved successful, after bark and other remedies had failed."

My personal experience with this article has been very satisfactory, and has, I believe, been sustained by others in this immediate district, who have given it a fair trial and observed closely its effects. It was largely used by the Cherokee Indians prior to their removal from this country to Arkansas, and is very much used by the country people in "domestic practice" at the present time.

As a tonic it is of unquestionable value in dyspepsia. I know of no remedy that excells it, either administered alone or in combination; in complicated cases, as with other remedies if combined its efficiency is increased. Many persons in this section, troubled with dyspepsia or indigestion, chew the root daily with marked benefit. As a tonic and stomachic it is similar to gentian, and may be used in cases where gentian is indicated.

It has proved valuable in my practice in dysentery, cholera morbus, cholera infantum, and bilious cholic.

In sickness of the stomach, incident to pregnancy, it acts like a charm. I have never had a case when it not only immediately relieved all nausea and sickness, but so invigorated the system as to prevent a return of all the disagreeable symptoms.

In bilious cholic I prepare a strong tincture of dried root, and give it in teaspoonful doses every half hour until the disease yields,

and in severe cases combine with valerian and conium as follows:—

Tincture Fraxea,	-	-	-	-	One Ounce.
Fluid Extract Valerian,	-	-	-	-	"
Conium,	-	-	-	-	One Dram.

Dose—A teaspoonful every half or every hour according to circumstances.

From the bruised root treated by ether, I have obtained a yellow crystalizable substance, much resembling columbin. I hope, at another time to give in detail its use in a number of cases, and refer to the experiments of others in determining its active principle. In the meantime it would be interesting if others having given this article any attention would communicate their observations.

Remarks on Concentrated Preparations, Simple Tests and Easy Method of Analysis.

CONSTITUENTS OF PLANTS.

Without entering into the particulars of nutrition and the general subject of vegetation, I propose briefly as possible to consider the constituent elements of vegetables, their properties, &c., and then pass to the consideration of the main subject of my articles.

In considering the chemical properties of a vegetable, we will divide them into three classes.

- 1st. Indifferent or neutral principles.
- 2d. Acid principles.
- 3d. Alkaloid principles.

INDIFFERENT PRINCIPLES—These principles are so-called because they have no acid or alkaline properties, and combine with both; these principles are numerous, the most important of them we shall only consider.

1st. *Cellulose*.—formula $C^{12} H^{10} O^{10}$ is the substance which is left after the action upon any kind of vegetable tissue of such solvents as are fitted to dissolve out the matter deposited in its cavities and interstices; is a flexible mass, insoluble in water, alcohol, ether, alkalies, concentrated hydrochloric and nitric acid; destructive distillation converts it into coal, keeping the form of the cell; sulphuric acid transforms it into dextrine; boiling a long time in diluted sulphuric acid converts it into *grape sugar*; iodine colors it a pale yellow. In the process of vegetable organization

cellulose is converted into wood or lignin and cork substance; by other chemical processes it is converted into starch.

Lignin or woody substance constitutes the fibrous structure of all vegetable substances; is insoluble in alcohol, water, and the dilute acids. Soluble in caustic potassa; slightly soluble in concentrated sulphuric acid; by boiling for some time in diluted sulphuric acid it is converted into grape sugar; digested in nitric acid it is converted into oxalic acid.

Cork substance is very similar to the lignin, it is insoluble in sulphuric acid, and not completely soluble in caustic potash. M. Chevreul has extracted from it a greasy matter called *suberine*.

2d. *Starch*.—C.¹² H.¹⁰ O.¹⁰ Starch is found in every vegetable, and all parts of them; is quite insoluble in cold water; soluble in hot water. When allowed to stand with water it is decomposed and converted first into dextrine, then into grape sugar, and last into *acetic and lactic acids*. Boiled in diluted sulphuric acid it is converted into dextrine, and by further action into grape sugar; by boiling in nitric acid, it gives oxalic and mucic acids; with iodine it produces compounds of intense blue color, which is its most remarkable property.

8d. *Dextrine*.—C.¹² H.¹⁰ O.¹⁰ This substance is of a yellowish dark brown color, insoluble in alcohol and ether; soluble in water; diluted sulphuric acid transforms it into grape sugar.

4th. *Sugar* is an abundant vegetable product existing in the juices of many plants. We meet with the varieties called *cane sugar, grape sugar, sugar of milk, fruit sugar and treacle*; their properties are quite familiar to every one. In analysis it is frequently the practice to dispose of the sweet substance found in vegetables, as *sugar*, or include it in the extractive matter. I propose to make a distinct classification, because the varieties are capable of isolation and of being determined. Cane sugar digested in diluted sulphuric or muriatic acid is converted into grape sugar; with stronger acids it is changed into two brown substances insoluble in water, one of them soluble, the other insoluble in alkaline liquors; with nitric acid it is converted into oxalic acid; of the varieties, however, I shall speak at another time.

5th. *Pectin or vegetable gelatine*.—This substance which is to be

carefully distinguished from animal jelly. Pectin is found in almost every kind of plant, and distributed through all their parts; but more generally in the juice of fruits; is an opaque substance when dried and powdered, if mixed with water, it swells up and forms a jelly. Diluted sulphuric acid transforms it into grape sugar; if boiled in alkalies it is transformed into pectic acid.

6th. *Gum* is a common proximate principle of vegetables, and is not confined to any particular part of plants. It exudes from natural or artificial cracks in the barks of some trees; in the natural state it is liquid, but becomes solid by exposure to the air. Is soluble in water and in alcohol diluted with its volume of water; insoluble in concentrated alcohol and ether, forms a salt with oxide of lead; formula of which is $2 (\text{PbO.}) \text{C.}^{12} \text{H.}^{10} \text{O.}^{10}$

7th. *Mucilage*.—There is but little difference between gum and mucilage, they are usually classified as the same. Gum is entirely soluble in water, while mucilage swells up in it and does not dissolve.

8th. *Mineral salts*.—These salts are found in every vegetable, in every part of it; their composition varies according to the plant and the part in which it is found; the soil upon which the plant is grown; the system of cultivation pursued. The study of these agents is interesting and instructive; it is easy to judge of the circumstances which render a soil barren or productive, for each kind of plant requires for its vigorous and healthy growth, to be supplied with inorganic substances of a specific nature and in certain quantity.

We could include in the class of indifferent or neutral principles the *fixed oils, volatile oils, waxes, resins, coloring matters, extractive matter, &c.*, but we prefer to take them up after the consideration of the two other classes.

II. **VEGETABLE ACIDS**.—Those compounds are regarded as vegetable acids which possess the properties of an acid, and are derived from the vegetable kingdom. All vegetable acids have very strong reactions; they change the color of litmus from blue to red; exist in every vegetable, partly free, partly combined. The principle properties of the acids are to combine with the basis in different proportions, forming salts. Some of them possess medicinal properties. The tannic acid is the most used in a free state.

VEGETABLE ALKALOIDS.—They are found ready formed in certain vegetables; are so named because they have identical properties with the mineral basis, restore the color of litmus reddened by an acid; combine with acids and form definite salts; their chemical reactions are precisely similar to the mineral base.

Alkaloids are formed of oxygen, hydrogen, carbon and nitrogen. Some, but very few, contain an inorganic element like sulphur, &c. Usually alkaloids are not free in plants, but are combined with acids forming natural salts, slightly soluble in water; soluble in hot alcohol. They are the last of vegetable preparations to be decomposed by atmospheric action, and generally all alkaloids present very strong medical properties, and much is often gained by the administration of the active principle, separated from the plant in the crude state.

Such are the different principles found in vegetables. In the next article I shall consider those which are neither acids or alkaloids, and which are largely used as remedial agents.

Strychnia and its Uses.

BY H. R. DE RICCI, ESQ.,

Surgeon to the Ballymahon Hospital and Dispensary.

(In case of paralysis arising from lesions of the encephalon and in epilepsy, strychnia is absolutely injurious; whilst in chorea and paralysis agitans, it is at best useless.)

The diseases in which I have found nux vomica and its preparations of most use are those where, from some cause or other, the *nervous powers* are not as vigorous as they should be,—where there is a lassitude and a want of tone in the system,—in short, in cases of *functional derangement*; whilst in lesion or disease of the nervous centres, its employment has always proved injurious in my hands. In every form of dyspepsia not arising from organic lesion, its use will be found advantageous, but most especially in the dyspepsia of literary men, lawyers, and scholars, especially when accompanied by constipation. Also in that relaxation of the muscular fibre, total lassitude, and want of tone, for which the physician is so often consulted by ladies who go out much into society; a state almost invariably accompanied by leucorrhœa, indigestion, loss of appetite, and a certain amount of erethismus—here nux vomica and its preparations will be found of the greatest value. But it is in chlorosis that its efficacy will be really manifested,—for though chlorosis is ranked as a blood disease, it is more strictly speaking a disease of impaired innervation; and the deficiency of red discs in the blood, which causes the pecu-

liar greenish yellow color of the patient, and from which very appearance the name of the disease is taken, is the effect of imperfect assimilation, the primary cause being either an impaired or perverted action of the nervous functions, a fact which will be apparent to the most superficial observer: for how often will be found, out of a large and healthy family, one of the daughters, *and one only*, acquiring by degrees the pallid look of incipient chlorosis, while all the rest retain their wonted healthy aspect; and yet the sickly one has all the while been exposed exactly to the same physical conditions, breathed the same air, dwelt in the same rooms, eaten the same food—why then should this one be deficient in blood-discs? If now the careful physician searches into the cause, he will, in all probability, find out by degrees that, some time previous to the setting in of the disease, the patient had suffered from some strong mental emotion, a sudden fright, or sudden unexpected sorrow—and from that had dated the commencement of her illness.

By far the greater number of chlorotic cases which I have met with in the upper classes had their origin in some such mental impression, and this fact would of itself, I think, be sufficient to characterise this disease as one of deranged nervous function, even if we had not the corroborative testimony derived from medical treatment. Now, if a case such as I have supposed, is treated solely with chalybeates, but little progress will, in all probability, be made towards recovery; in vain you will administer the metal so much needed by the system—the lacteals will fail to discern and appropriate it. It will pass away by the bowels, and there do mischief by increasing the constipation already, most probably, existing. To remedy this the usual purgatives of aloes and other such drastics will be resorted to, probably in heroic doses, and then, by increasing the debility, the patient will be placed in a worse condition than before. Let, however, the iron be combined with quina, a medicine which I need not say acts especially on the nervous system, and the improvement will be manifest; but if for quina you substitute strychnia, then the effect will be truly surprising. Until lately I was in the habit of adding the strychnia in solution to a bitter vegetable infusion containing some preparation of iron, generally the citrate, but my friend Dr. Aldridge, having brought under my notice a double citrate of iron and strychnia, analagous to the well-known preparation of iron and quina, I have adopted its use with marked advantage and success. This salt contains, I am told, one grain of strychnia in every hundred. The dose I have been in the habit of commencing with, has been two grains twice a day, immediately *before or after* a meal, selecting in preference breakfast and lunch, and increasing its gradation to ten and fifteen grains twice a day. My prescription has generally been the following:—Citrate of iron and strychnia, forty-eight grains; chloric ether and aromatic spirit of ammonia, of each a dram and a half; infusion of chiretta, sufficient to make a twelve ounce mixture: of this a table-spoonful at dinner and at lunch. By the use of this combination the troublesome constipation, frequently alternating with diarrhea, so often accompanying chlorosis, will be entirely obviated; the bowels will resume their healthy action, in consequence of their peris-

taltic motion being improved, and the lacteals and absorbents being aroused to increased action, will seize upon the metal and rapidly assimilate it. The combination of strychnia with iron will also tend to check that excitability which manifests itself under so many and varied forms in this disease, and will correct that lassitude which is one of the characteristics of this malady. In illustration of what I have been asserting, I shall subjoin the account of a case which I had ample opportunity of watching and absolute control over, trusting that the details may not prove uninteresting.

The patient, a young lady aged seventeen, had been for some months declining in health; she had a slight husky cough; total loss of appetite; great palpitation of the heart on the smallest exertion; and was pallid in the extreme; but she had not the peculiar *greenish yellow* of chlorosis; it was rather the washy look seen in cases of excessive hemorrhage,—with all this she was not at all emaciated, but, on the contrary, quite plump. Her family were in great tribulation about her, as some of her relatives had died of consumption, and the young lady herself was convinced that she had disease of the heart, from the pain she suffered almost incessantly in it, and the fearful palpitation which arose on the smallest exertion. Several physicians, both in Dublin and elsewhere, had examined her, and some feared there was incipient valvular disease. Sir. H. Marsh, had, however, given a decided opinion that the derangement was solely functional; and, after the most careful and repeated examinations, I came to the same conclusion, although the following peculiar symptom led me, for some time, to fear a threatening of disease of the mitral valve. When the heart's action was at all excited, its sounds got so tumultuous and mixed up, that it was impossible to discriminate one from the other; but when it was comparatively tranquil, by placing the stethoscope over the apex of the heart, one could hear, amid the irregular pulsations and clicks of that organ, a prolonged musical note, apparently synchronal with the first sound. There were also marked venous murmurs in the jugulars, especially in the right one. But as the case progressed to a cure all these abnormal sounds first diminished, and then ceased altogether, thus proving them to have been only due to functional derangement. Before coming under my care this lady had been taking chalybeates abundantly, and in every variety of combination with tonics. She had taken, among others, a quantity of valerianate of iron, but without any apparent amendment. I at once put her on strychnia and iron, which, in this case, I employed as follows:—One grain of strychnia was dissolved in two minims of sulphuric acid, added to thirty ounces of water, in which one dram of ammonio-citrate of iron had been dissolved: the whole was then placed in a gazogene, and charged with carbonic acid. The dose was one wine-glassful daily, immediately before lunch. The amendment commenced before the end of the first fortnight; the bowels, that had been always obstinately constipated, acted now of their own accord; the want of appetite, which had actually amounted to a disgust for food, disappeared; the color returned to the face; the heart ceased to beat irregularly, and at the end of three months, there was not a trace of the former delicate sickly appearance.—*Dublin Quarterly Journal*, Feb., 1858, p. 47.

Feeding Infants.

BY PROF. A. P. MERRILL.

GREAT mortality prevails among children from injudicious feeding. Some persons attempt to support them upon articles of food which contain little else than starch or gum, neither of which are capable of themselves of sustaining animal life. Others confine them principally to the milk of the cow, the excess of casein in which they are unable to digest; and to these other articles are added, which are either indigestible or innutritious. Hence the large amount of sickness and mortality from disordered stomach and bowels, and which are generally attributed to teething, to worms, and to any and every other cause but the true one, errors in diet, producing indigestion.

In the last July number of the *American Journal of the Medical Sciences*, there is a clever article on "Natural and Artificial Lactation," by Dr. Cumming, a brief abstract of the concluding portion of which I am tempted to publish, for the information of young and doubting mothers. He says, and sufficiently proves by physiological and chemical argument, that nothing but milk can with propriety be used as the food for infants; and even this is apt to fail, and to give rise to fatal maladies, unless it be made to correspond very closely in its constituent elements with human milk.

Cow's milk differs from human milk in some important particulars, as has been accurately ascertained by chemical analysis. It contains nearly three times as much casein as human milk, but somewhat less than twice as much butter; while human milk contains nearly one-third more sugar, and a little more water than cow's milk. Merely diluting cow's milk by adding water, with the addition of sugar, therefore, as is commonly done, will not fit it for easy digestion by the infant stomach. There will in this case always be an excess of casein, and a deficiency of butter. But the proportions are materially changed by permitting the cow's milk to rest undisturbed until the lighter particles rise toward the surface; and nearly the same results are obtained by using only the milk last taken from the cow.

Dr. Cumming proposes, therefore, to have cow's milk at rest for four or five hours, and then to remove the upper third part for use; or to take only the latter half as furnished by the cow. He then advises us to add for a child not more than ten days old, two and a half parts of water, and one-fourth part of sugar. This combination gives almost the exact proportions of human milk at that early period of lactation. The exact proportions given, are—Milk 1000—Water 2643—Sugar 243. The sugar and water are decreased as the child grows older, until, at five months, the proportions are: Milk 1000—Water 1000—Sugar 104. And at eighteen months, the proportions are: Milk 1000—Water 500—Sugar 63. The child should take this food at a temperature of 100 to 104 degrees, and by suction. An eight-ounce vial, with a quill rolled in a long strip of Swiss muslin for a stopper, is the best arrangement for cleanliness and convenience. Tubes having narrow passages cannot be readily cleansed.

A child ten years old will take about thirty-two ounces daily, in eight meals of four ounces each; and the meals should increase in quantity and diminish in number, as the child grows older, so that at three months seven meals of eight ounces each may be taken. The milk should be given at regular intervals, except that the child should be early accustomed to pass six to eight hours at night without feeding. This regularity of feeding, with proper intervals, is in accordance with a physiological law of digestion applicable to all persons, namely, that the stomach should have time fully to digest its food before other food is taken into it.

How to render Cow's Milk more suitable for Children.

BY DR. GUMPRECHT, OF HAMBURGH.

Dr. Gumprecht prefaces his observations by remarking upon the fact that milk often disagrees with children, producing indigestion, acidity, flatulence, choleric, diarrhea, &c., &c. In consequence of this, it has been proposed to improve it by the addition of water and sugar of milk, which experience has proved to have imperfectly attained the object in view. Reflecting on the effect of salt in rendering the food for adults not only more palatable, but also more digestible, increasing the activity of the glands of digestion, and rendering the albuminous substance and fat soluble in the fluids of the stomach. Dr. Gumprecht was led to the idea of adding salt to milk, both for weaned and older children, with the result of not only preventing the derangement of digestion, but moreover of removing them in cases where they previously existed. No author who has written on the nutriment of weaned children has spoken of this most useful addition to milk; but a Dutch physician mentioned to Dr. Gumprecht, in conversation, that in his practice in Holland he had frequently added a little salt to milk for weaned children, with most satisfactory consequences.

In the rural districts of Holland, salt is frequently added to the fodder for pigs and cattle, for the purpose of preventing diarrhea, which so often exists in consequence of imperfect digestion, and this suggested the adding salt to milk, not merely for healthy children, but for strumous children and such as are affected with worms. Dr. Gumprecht quotes a passage from L. Nussdorff's "*Lehrbuch der Gesundheitspflege*," 1856, on the importance of salt in the nutriment of man and animals.

With regard to the quantity of salt which should be added to the milk, it must depend on the age of the child. To render cow's milk like human milk, it should be boiled and skimmed, and a little sugar of milk and salt added.—*Journal für Kinderkrankheiten*, and *Dublin Hospital Gaz.*, from *Ranking's Abstract of Med. Sciences*.

Atropia in Epilepsy.

FROM THE GERMAN, BY THEODORE A. DEMME, M. D.

Dr. Max Maresch (*Wienatschr.*) physician to the Vienna Hospital for the Insane, gives a favorable opinion in regard to the efficacy of atropia in epilepsy. He was induced to make this therapeutic application of the alkaloid in consequence of the known effects of belladonna upon the vagus, accessorius, sympatheticus and trigeminus. We are inclined to think that this application of the atropia was an original suggestion—an idea—not a deduction wrung from certain fixed facts as premises.

M. M. prescribed the atropia in eighteen cases; three were completely cured, and thirteen much improved, the attacks being less frequent and violent.

The one-fiftieth of a grain was given every morning before breakfast for a period of from sixty to ninety days—an intermission of thirty to forty-five days allowed to the patient, and then the medicine again prescribed. It is important that the patient use neither coffee or cocoa, as the active principles of these counteract the physiological effects of the atropia.

In the above dose the usual symptoms of belladonna were produced—the dryness of the fauces, difficulty of speaking, dilatation of the pupils, and, in three cases, a roseoloid exanthem.

Tetanus Relieved with Ext. of Indian Hemp.

(*Cannabis Indica.*)

Mr. E. W. Skues relates (*Eding. Med. Jour.*, April, 1858,) a case of this. The subject of it was a healthy girl at Honduras, nine years of age, who was suddenly seized, April 9th, 1857, with a rigidity of the right arm and leg, accompanied by pain, particularly in the arm. When Mr. S. first saw her, both leg and arm were stiff, the hand flexed on the forearm, the knee semi-flexed, and the right foot turned inward; the pulse eighty, soft; the tongue white; bowels open; the countenance cheerful; and there was no difficulty in opening the mouth.

The history of the case was, that a month previously she fell and cut her right wrist on some broken glass, and the wound healed quickly, without any bad symptom; that a few days previous to her illness she complained of pain in her back, but of no uneasiness in the cicatrix.

There was an irregularly triangular cicatrix on the ulnar border of the right wrist, over the tendon of the flexor carpi ulnaris.

A purgative was ordered, and the next day she was better. Little change occurred until the fifth day, when some difficulty of opening the mouth was observed; and by the sixth day the symptoms were well marked. There were frequent attacks of opisthotonos; the pulse was rapid and weak; the countenance was indicative of distress; and the mouth could only be partly opened with difficulty.

In consultation with Dr. Young, the public medical officer of the settlement, who kindly favored me with his valuable advice and assistance, it was determined to use Indian Hemp.

The medicine was first given in quarter-grain, and afterwards in two-grain doses, repeated hourly until narcotism was induced. Strong soup, wine, and arrowroot were freely given.

The medicine produced marked relief, and was used freely—the quantity given daily varying from four to eighteen grains, and the child was kept almost constantly narcotized. The attacks of tetanic spasm became gradually less severe; and after twelve days the medicine was discontinued, and the child recovered perfectly—though, after all symptoms of the general disease had disappeared, some stiffness of the arm remained for eight or ten days.

The medicine was given dissolved in spirit, each dose being mixed with water at the time of administration. It appeared to act as a direct sedative, creating very little excitement, and did not induce constipation.

Editorial.

We commence in connection with the article upon *Krameria*, the publication of an analysis of the various articles of the *materia medica*, which we shall take up from month to month; intending to pursue this general plan until those which have not been the subject of analysis are treated upon, and an analysis given. We regard this as one of the most important subjects to which we can direct our attention; instructive and useful to our readers as well as ourselves, and essential to the formation of correct opinions in the selection and use of remedies from the great variety offered by our vegetable *materia medica*. We are aware that a work of this kind to be well done requires much labor and investigation, and no little responsibility; if we can develop anything of practical utility to the profession we shall be amply rewarded. The principles by which these results are determined are exceedingly elaborate and detailed, if there is sought merely a knowledge of the general nature of the substance, and are satisfied by the application of certain tests, we obtain evidence of the presence of those elements of which a compound is made up, we perform what is termed a qualitative analysis; but if we desire to ascertain the nature and actual amount of the elements of a plant by separating the constituents completely from each other, we perform what is termed a quantitative analysis, which is the most essential to a correct estimation and comparison of the properties of a plant.

Numerous and diversified as are the forms and properties of bodies of vegetable origin—and complex as in general their composition, they are nevertheless made up of oxygen, hydrogen, and carbon, and a large number contain nitrogen; distinct compounds of these which exist, ready formed in plants are called the immediate or proximate principle, and determine its peculiar medicinal characteristics; these are distributed over the entire plant, some-

times confined to a part, and in some cases mixed with such a variety of other elements that distinct processes are required for its separation.

To determine the formula of the *resins*, which may found, by organic analysis, that they may be properly classified will be our aim particularly, as they are comparatively new bodies which have been little investigated and studied; indeed the subject presents a wide field for study and investigation. The analysis of soils—plants grown upon particular soils—all the circumstances connected with the growth of plants, and the formation of their peculiar principles—the discovery of substances previously neglected or unknown—the alleviation of disease by new remedies which may be placed at the command of the physician—improved processes of combination, invests the subject with more than usual interest and commends it to especial consideration.

HYDROCYANATE OF IRON.—We have many letters of enquiry relative to the success of this remedy in epilepsy; thus far all the reports we have had of its use are very favorable, varying, of course, with the condition of the case, whether of long standing or not. No one will be more pleased with this statement than Dr. McGugin, who was the first, we believe, to call the attention of the profession to it and give it a thorough trial in his private practice. He writes us under date of March 30th, that a patient who is under treatment with the article states in a letter to him: "it is now nearly four months since I have had even a symptom of a paroxysm." Also a physician writes him he is highly pleased with the results of its use in a few cases of epilepsy, now and for some time past under his care.

Dr. Daniel Holmes, of Canton, Bradford Co. Pa., states that he commenced the use of the hydrocyanate of iron, as recommended by Dr. McGugin in a case of epilepsy, where the patient had not sat up for six months previous—had frequent severe spasms, and had been afflicted for six or seven years—had taken various remedies and been treated by a number of physicians; he placed her under the use of the hydrocyanate of iron, and has persisted in it twice a day for nearly three months. His patient has so far recovered as to leave the house and visit her neighbors. Another case—a lad fourteen or fifteen years of age, badly afflicted, had been longer without a paroxysm than at any previous period. Hoping these cases may be permanent cures, he promises us the particulars at another time.

Dr. R. J. Hemstreet, of Poland, Herkimer Co. N. Y. writes that he has used the aqueous solution of extract of belladonna, one scruple to one ounce of water, as an anti-lactescent, as recommended in the previous numbers of this Journal; the effect was beyond his most sanguine expectations.

Illinois State Medical Society meets at Springfield, 1st Tuesday in June next.

SCAMMONY—PODOPHYLLIN.—A process has been patented in England by Dr. Williamson, for extracting the pure resin directly from the root. Dr. A. B.

Garrod, Professor of *Materia Medica* at University College, has made it the especial object of experiment to test its comparative cathartic powers with the best commercial resin, and has made a report which is published in detail in the March number of the *London Pharmaceutical Journal*, by which it appears that the resin is produced much cheaper than if obtained from scammony, containing the largest per centage of resin, and that the cathartic energy is somewhat greater. It appears from the large number of trials made, that twelve grains administered to a person, in many cases would produce only one action; in others the same dose would produce four or five actions. From eight to ten grains appears to be the average doses of the pure resin necessary to produce the usual number of actions of cathartics generally.

The large doses required suggest with much force the substitution of podophyllin for scammony, both as a simple remedy and in all compound preparations—the dose being from one-half to two grains, diminishing the bulk of the pill, and if economy is the point is much cheaper, producing as good an effect, a desideratum unquestionably much desired.

Dr. Stabler in an essay upon podophyllin, in the transactions of the *Amer. Pharmaceutic Association*, says:—"That podophyllin may be advantageously substituted for extract of jalap in the compound cathartic pill of the pharmacopœia, we have abundant evidence to believe. The object of that preparation was to combine smallness of bulk with efficiency and comparative mildness of purgative action, and a peculiar tendency to the biliary organs."

MEDICAL AND LITERARY WEEKLY is the title of a weekly paper just issued by Drs. Taliaferro and Thomas, of Atlanta, Ga. The introduction of the *literary* with the *medical* is a new feature in the journals of the day, and we think a very good one. Such a journal will have a wide circulation, and much good will be done if the objects they have stated in their introduction are steadily pressed upon the consideration of the public. They announce as a particular feature, that they intend to expose the mystery and secrecy of quackery and give the people such information as will cause them to avoid the indiscriminate use of the worthless panaceas and nostrums so extensively advertised over the country; every physician will commend this plan, and we hope the editors will give it their attention.

CORRECTION.—The editors of the *Journal of Materia Medica*, &c., have attributed an article on Ammonio Ferric Alum to our pen, which is due to that of W. Hodgson, Jr., of Philadelphia. The error has arisen from the article in question having been inserted in the editorial department.—*American Jour. of Pharmacy*.

Correspondents will oblige by writing plainly their names, town, county and state. We have in several instances, been unable to answer letters because these are omitted.

BOOK OF FORMULÆ.—Eight pages of this work will be appended to each number of the *Journal* hereafter.

Subscribers will please notify us if they do not receive the *Journal* regularly.

Pharmacy, &c.

AMOUNT OF CAFFEIN IN COFFEE BERRIES.

Dr. A. Vogel recommends the use of benzol for the purpose of extracting caffen from the berries. This substance dissolves both the caffen and the oil contained in the berries, but when the solution is evaporated to dryness and the residue is mixed with hot water, the caffen alone is dissolved, and, after the separation of the oil that floats on its surface, may be obtained as fine crystals by evaporating the solution.

OILED PAPER AS A SUBSTITUTE FOR OILED SILK AND GUTTA PERCHA IN SURGICAL DRESSINGS.

This material was introduced by Dr. James McGhie, of the Glasgow Royal Infirmary, and has been used with success in hospital practice. The following is the mode of preparing it.

Having secured a paper of good texture, the next desideratum is the fluid or varnish by which it is to be coated and waterproofed. This is made by re-boiling boiled linseed oil with litharge, acetate of lead, sulphate of zinc, and burnt umber, an ounce or two of each to the gallon of oil. No artificial heat is employed in drying. A square board is now procured, several inches broader than the size of the sheet to be prepared. Upon this the sheet is spread, and well covered by means of a broad brush, with the mixture. The first sheet should be brushed on both sides. On this a second sheet is placed, slightly projecting over the first, at one end, in order to facilitate the lifting of the sheets when they are to be hung up to dry. This is also to be coated with the mixture. This process is to be repeated till a mass of sheets, from twenty to fifty in number, is prepared. The board is then to be carried to some unoccupied apartment, across which cords have been stretched, and the sheets are to be lifted *seriatim*, and attached by one end to the cords by means of bent slips of zinc or tinned iron. A very small space is sufficient to hold a hundred sheets or more. After twenty-four hours or more, it is ready to be taken down. As the sheets are found to be liable to stick to one another, they may be dusted with French chalk, which prevents adhesion. The addition of a little wax and turpentine renders the dusting or any other measure unnecessary. There is only one part in the above process where any manipulatory difficulty may at first be encountered, and that is in spreading evenly and expeditiously, the dry sheet on the oiled one. This is easily overcome by working the brush freely from the centre to the circumference of the sheet.

The following are its more obvious advantages:—

1. Its extreme cheapness does away with any inducement which might otherwise exist to employ the same piece more than once. A ream, or 480 sheets of paper costs from 7s. 6d. to 10s., and a gallon of the prepared oil about 8s., so that each sheet costs a fraction of a half-penny. This does not include the cost of manufacture, which would slightly increase the expense.

2. Its transparency.—When applied over the dressings of a stump, or any cut surface, when hemorrhage may be feared, the danger can be seen at once and obviated.

3. Its lightness.—It adds little to the weight of dressings, and it can cause little or no pressure on a tender surface. It is particularly useful in this respect for covering large burnt surfaces.

4. Its extreme adaptability.—It can be supplied with great niceness to any part, so as to give rise to little or no inconvenience. When applied in any particular way, it retains the form impressed upon it.

5. It can be torn easily in any direction. In this respect it contrasts favorably with oiled silk and gutta percha.

6. It can be made of any required strength by folding it one, two, three, or more times, without becoming inconveniently thick.

7. It possesses a certain amount of adhesiveness, which is increased by the heat of the body, and thereby more effectually prevents evaporation from wet applications.—*Lond. Pharm. Jour.*

BOTTLES TO PREVENT ACCIDENTAL POISONING.

A bottle has been recently patented in England, to obviate the frequent recurrence of accidental poisoning, which has of late years excited so much painful attention in that country.

The object sought to be obtained was a bottle which should present so marked and sensible a difference in appearance, touch and use, to those employed for ordinary purposes, that the possibility of mistake would be avoided. The *Lancet* gives the following description of the bottle:—"In shape the bottles are hexagonal, with deep flutings or grooves running lengthways along the bottles. To sight and touch they instantaneously present most striking points of difference from any other kind of bottle. Vessels of this description, made in blue glass, are intended to be used for external applications only. For poisonous or powerful medicines, prepared or not from prescriptions, the dose of which is a tea-spoonful and under—bottles similarly shaped and fluted, in white glass, are proposed to be employed. The bottles are provided with an entirely new contrivance, the effect of which is to make it impossible to pour out the contents otherwise than very slowly and gradually—almost drop by drop. This is accomplished by the simple and inexpensive plan of contracting the neck of the bottle at the lower part of the shoulders, and the mouth being of the usual size, the process of filling is but slightly affected by the contracting. The very deliberate and cautious action thus produced, will, it is believed, deter any one from taking over doses of medicine; while it is difficult to imagine a case in which any one could pour out and take the whole contents of one of these bottles in mistake for something else.

To illustrate the manner in which the patent bottle acts in comparison with ordinary ones, it may be mentioned that not more than a tea-spoonful would come out of the one, in the same time that an ordinary phial would take to discharge its contents. A person being about to take a wrong medicine, say

laudanum, contained in a patent bottle, and proceeding to pour it would be struck by finding that instead of the whole draught having run into the wine glass at once as usual, merely a teaspoonful would have left the bottle. This would naturally lead to an examination of the label and consequent discovery of the dangerous error.

Although to employ a two ounce bottle would tire the hand and arm of the holder, yet when only the proper dose is sought to be withdrawn, the patience is not taxed in the slightest degree."—*Med. and Surg. Reporter*.

ON THE PREPARATION OF LIQUID TARTRATE OF POTASH, AMMONIA, AND PEROXIDE OF IRON.

By M. Carrie, Pharmacien of Paris.

The potassio-tartrate of iron being incapable of preservation in aqueous solution, on account of its tendency to rapid decomposition. M. Carrie, a pharmacien in Paris, has conceived the idea of insuring its solubility, and particularly of preserving it, by the addition of ammonia. The following is the mode of preparation recommended by the author:—

Take sixteen ounces of bitartrate of potash; dissolve one-half in three quarts of warm distilled water; saturate this solution with pure sesquicarbonate of ammonia; add the remainder of the bitartrate; raise to a moderate heat, adding by degrees, and to excess, recently precipitated and still moist peroxide of iron; afterwards filter, to separate the uncombined oxide; evaporate at the heat of a water-bath, until the cold liquor marks seven degrees on the saccharometer; add a few drops of liquid ammonia; shake; allow it to deposit during twenty-four hours; filter again, and preserve for use.

The preparation of tartrate of potash, ammonia, and peroxide of iron thus obtained, is, according to M. Carrie, a liquid of an agreeable taste, possessing a reddish brown color, keeping for an indefinite period, and containing one part of iron in nine of water.—*Bul. Gen. de Thera.* 15th July, 1858, p. 23, and *Dublin Hospital Gazette*.

ARNICA CERATE.

N. Hynson Jennings (*Journal of Maryland College of Pharmacy*), prepares a plaster of hard cerate of arnica, in the following way:—Take of arnica flowers, four ounces; olive oil, six ounces; beeswax, ten ounces; diluted alcohol, sulph. ether, of each a sufficient quantity. Having reduced the flowers to a tolerably fine powder, moisten with diluted alcohol, and pack firmly in a glass funnel; exhaust, and by means of a water bath, evaporate to about five fluid ounces, and mix with the oil and wax, previously heated together; then boil over a slow fire till all moisture is dissipated, and lastly strain. A little ether is required to dissolve the resin deposited on the sides of a porcelain dish.

He states that it has been found to afford great relief in tenderness of the feet, produced by exposure to intense cold.—*Peninsular Journal*.

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This valuable and popular medicine, prepared in conformity with the analysis of the water of the celebrated seltzer spring in Germany, in a most convenient and portable form, has universally received the most favorable recommendations of the medical profession and a discerning public, as the most efficient and agreeable Saline Aperient in use, and as being entitled to special preference over the many mineral spring waters, aciduliferous powders, and other similar articles, both from its compactness and greater efficacy. It may be used with the best effect in all Bilious and Febrile diseases, sick Headache, Loss of Appetite, Indigestion, and all similar complaints, peculiarly incident to the spring and summer seasons.

It is particularly adapted to the wants of travelers, by sea and land, residents in hot climates, persons of sedentary habits, invalids and convalescents, captains of vessels and planters will find it a valuable addition to their medicine chests. With those who have used it, it has high favor, and is deemed indispensable.

In a torpid state of the Liver it renders great service in restoring healthy action. *In gonorrhea and rheumatism* it gives the best satisfaction, allaying all inflammatory symptoms, and in many cases effectually curing those afflicted. *Its success in cases of gravel, indigestion, heartburn, and costiveness* proves it to be a medicine of the greatest utility. *Acidity of the stomach, and the distressing sickness so usual during pregnancy* yields speedily and with marked success under its healthful influence. *It affords the greatest relief to those afflicted with, or subject to the Piles,* acting gently on the bowels, neutralizing all irritating secretions, and thereby removing all inflammatory tendencies. In fact, it is invaluable in all cases where a gentle aperient or purgative is required.

It is in the form of a powder, carefully put up in bottles, to keep in any climate, and merely requires water poured upon it to produce a delightful effervescent beverage.

Taken in the morning, it never interferes with the avocations of the day, acting gently on the system, restoring the digestive powers, exciting a healthy and vigorous tone of the stomach, and creating an elasticity of mind and flow of spirits which give zest to every enjoyment. It also enables the invalid to enjoy many luxuries with impunity, from which he must otherwise be debarred, and without which life is irksome and distressing.

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THE
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JUNE, 1859.

[Series.

Further Remarks on Indigenous Astringent Plants.

BY CHARLES A. LEE, M. D.

NUMBER VI.

WE have seen that tannic and gallic acids are the chief astringent principles contained in plants; and it may, perhaps, be safely assumed that these acids, in an isolated form, are capable of fulfilling the purely astringent indication with greater promptness, certainty and success, than the crude articles containing them in any of their forms of exhibition. Being more concentrated, they may be given in smaller doses, and are, therefore, less liable to derange the digestive organs. As they are more readily absorbed, they are, consequently, more speedy in their action. Moreover, they are less unpleasant to the taste, and being freed from other matters which might modify their effects, greater reliance can be placed on their fulfilling the astringent indication. We are not, however, to suppose that these agents used alone, can produce all the therapeutic effects attainable by the employment of other preparations of the plants containing them, or, in which they predominate, as the solid or fluid extracts. This might be expected, from the fact that they are often associated with other important principles, as *rhubarbaric acid* in rhubarb, counteracting the astringency and rendering it cathartic; a tonic principle in cinchona, gentian, cornus, wild cherry, &c. As a well-known example of this modifying power we may instance the combination of tannic acid with quinia; a small quantity of

the former adding greatly to the antiperiodic power of this alkaloid. In most cases of atonic hemorrhage, whether uterine, gastric, pulmonary or cystic, pure tannic or gallic acid will accomplish all that is desired; but in cases of great relaxation of the tissues, with debility of the digestive organs, consequent on protracted illness, or the result of diminished nervous energy, and especially if complicated with profuse serous, cutaneous or mucous discharges, a judicious combination of tonic, astringent, and in some cases, laxative principles, will best meet the exigencies of the case. As a general rule, then, it will probably be found that the extracts of astringent plants, prepared in vacuo, combining, as they do, astringent, tonic, laxative, or other important principles are best adapted to a majority of cases—perhaps, all, except where the purely astringent influence is wanted. Most of the valuable tonic barks and roots contain a greater or less quantity of tannic and gallic acids, which, doubtless, greatly add to their efficacy. These natural combinations may be imitated, but they cannot often be improved by art. Though the isolation of the active proximate principles of plants has, in several instances, been attended with strikingly beneficial results; it may well be doubted whether the practice has not been carried, in some instances, too far; and whether greater curative power would not be exerted by such preparations as contain all the active principles of the plant separated from inert matters. Conceding much that is claimed for the vegetable alkaloids, acids, fixed and essential oils,

NOTE.—It is now generally conceded that the alkaloids of barks (quinia, cinchona, etc.,) are not the only constituents which give these barks their medicinal properties, but that their antiperiodic power depends, in part, on other ingredients, and especially upon the combination in which the alkaloids are found in the natural state of the bark. In consequence of this fact Mr. Donovan, of Dublin, introduced, a few years since, an improved *syrup of bark*, obtained by repeated percolations with proof spirits and subsequent concentration by evaporation, and the addition of refined sugar. The *fluid extract of bark*, prepared in vacuo, is however, a superior preparation, as it contains all the virtues of this important drug in a state of perfect preservation, and it, moreover presents the active ingredients exactly in their natural state, which is essential, when we require its antiperiodic effect. The evaporation being conducted in vacuo, the proximate principles have undergone no change whatever; we have found it suited to many cases where quinine seemed to disagree or to fail of the desired effect. A good plan to exhibit it, is to combine it with some aromatic, as fennel or anise, which perfectly mask the bitterness of quinine, and simple syrup. Cinnamon water with lemon syrup are also good vehicles.

resins, &c., when given uncombined, we must still maintain that equal if not greater advantages may often be obtained by combination; for as Paine has well observed, if we enter nature's laboratory and examine her prescriptions, we shall soon be satisfied that several of her more potent remedies do not owe their valuable powers to any one specific ingredient, but to the combined or modified energies of various, and sometimes opposite principles. We see this truth well illustrated in the various articles usually ranked in the class of tonics; beginning with those that are simply bitter, we proceed through different species combining aromatic properties with bitterness, till we reach a third class, which add to these the principle of astringency, as in cinchona, cinnamon, wild cherry, the tulip tree, &c. Thus, by adding a small quantity of tannin and some aromatic, as cinnamon or cloves to quinine, we add much to its efficacy; opium will check diarrhea and mucous discharges, procure sleep and excite perspiration, when morphia would fail to produce these effects; and if all the virtues of this drug were contained in its morphia, it ought to have ten times the power which it is known to possess. The great superiority of the hop in the manufacture of malt liquors, consists in its combining aromatic, tonic, and astringent properties. The union of tonic and astringent powers in the rhubarb has been already alluded to; we might also refer to the sedative and cathartic virtues in colchicum; and to that perfect alimentary compound—milk, combining the four great staminal principles of nutrition, viz: water, sugar, albumen and oil. We do not pretend to question the advantages of correct analyses of the compound productions of nature, for it is obviously from a knowledge of their respective elements, and from a study of the influence which each exerts in the combination, that we may expect to derive important aid in improving the arrangements of art; while art in return may thus be enabled to modify and adapt to particular purposes the products of nature.

In regard to the action of astringents, varied and multiplied experiments have fully established the benefits resulting from their combination with other agents. With *tonics*, in senile cough and humoral asthma, as sulphate of zinc with quinine; or passive hemorrhage, where the hæmorrhagic diathesis is to be corrected, while the bleeding vessels are constricted; with *diaphoretics*, where

it is necessary to relax the cutaneous vessels, while we astringe those of the intestinal canal; with *antacids*, where we wish to neutralize acids, and at the same time check the abdominal secretions, as by the *pulvis cretæ compositus*; with *narcotics*, where diarrhea is dependent on, or associated with acrid fluids in the intestines; when we allay irritability by a *narcotic*, restrain the inordinate secretion by an *astringent*, and neutralize the acrid and acid matters by an *absorbent*. These instances will suffice to show the advantages arising from a combination of astringent with other virtues in the same prescription; and these we have in a great variety of forms, naturally existing in the same plant. Indeed, a careful examination of our indigenous astringent vegetables will result in the conviction that no two of them possess the same identical properties, but that each has qualities peculiar to itself, and that these depend on other principles variously associated in the same substance, by which the astringent effect is differently modified, so that although the several virtues act as a whole, that which is most predominant gives the greatest determination to the nature of the impression that may be produced. Even no two species of the same genus have precisely similar properties; each has a range of application peculiar to itself. This is well illustrated in the different species of *rhus*, *cornus*, *salix*, *rubus*, *trillium*, *erigeron*, *quercus*, *ulmus*, &c.; some of the species of which differ more widely in regard to their physiological and therapeutical properties than many genera. It is this variety which adapts these agents to so many different pathological conditions; and the fact that each species has specific powers best adapted to certain forms of morbid action, justifies more extended trials and experiments than have hitherto been made. The idea then, of substituting tannin or gallic acid in place of the extracts of these different plants is neither founded in just and correct theory, nor accurate clinical observation.

When we speak of tannic acid, we refer, of course, to that variety obtained from gall-nuts and oak bark, and which precipitates the sesquisalts of iron of a bluish black color. In these it is associated with gallic acid; but the other varieties of tannin, such as are found for example, in *kino*, *catechu*, *cinchona*, and *rhatany* are not associated with it, except in minute quantities. Nor are their infusions converted into it on standing, or exposure to at-

mospheric air, while they precipitate the salts of iron of a greenish black or greyish black color. Indeed, the varieties of tannin are so numerous, that it has been supposed by some chemists to be merely an association of resinous matters with an acid—often the gallic, which is supposed to render them soluble in water. What lends some probability to this view is, that it has hitherto been found impossible to obtain tannin free from acid, and moreover by treating any resin or charcoal with nitric acid, or by acting on camphor, the resins or some of the gum resins by sulphuric acid, an artificial tannin may be obtained, possessing all the properties of the tannin of gall-nuts or oak bark. Besides, the presence of the acid employed in its preparation may always be detected in artificial tannin, as long as it retains its characteristic property. Supposing, then, that tannin is essentially nothing more than a mixture of some acid with a resinous substance, it must not only partake of the specific properties of each of its elements, but it may also contain either bases or other foreign substances, which will give it accessory characters, in addition to those that are essential to it. Thus the acid combinations of the tannin of cinchona bark are more soluble in water than those of the tannin of oak; the tannin of catechu is less soluble in ether than that of cinchona; the tannin of kino is red, and very little soluble in cold water, insoluble in ether, and gives no precipitate with carbonate of potash or tartrate of antimony and potash; the tannin of the gall-nut is insoluble in alcohol; as, then, these substances differ in so many important respects, it has been suggested that they should be distinguished from the tannic acid of gall-nuts and oak bark by designative epithets derived from the medicine. Thus, that variety obtained from kino may be called *kino-tannic*, or *kinoic acid*; that from catechu, *catechu-tannic*, or *catechuic acid*; that from rhatany, *krameric acid*; from cinchona bark, *cinchona-tannic acid*, &c. Were such a nomenclature adopted, it would evidently lead to more definite ideas regarding the nature and proper use of this class of substances.

One fact in regard to the chemical history of tannin is too often lost sight of by the practitioner, namely, that though it possesses acid properties, it is precipitated by various acids, such as the muriatic, nitric, phosphoric, and arsenious, as its solution produces with the salts of all vegetable alkaloids—insoluble precipitates—

tannates of the organic bases thrown down—it may often be employed with advantage in cases of poisoning by alkaloids, and especially by the tartrate of antimony and potassa. It must, however, be recollected that owing to the frequent presence of hydrochloric or other acids in the stomach, a solution of tannin can never be regarded as a perfectly reliable antidote.

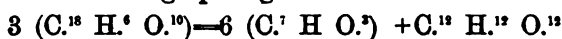
Gallic acid has recently been extensively employed in the place of tannin, in all cases of internal administration where a pure astringent indication was present. Prof. Simpson was one of the first to employ it in cases of uterine hemorrhage, and finding it more efficacious than tannin, it was inferred that it might prove equally successful in other forms of hemorrhage. Numerous trials have tended to sustain this conclusion. It has long been known that the two substances yield the same set of products when submitted to destructive distillation, and the researches of Braconnot go to prove that tannin is a compound acid, composed of gallic acid in combination with the elements of grape sugar; three atoms of tannic acid being equivalent to six atoms of gallic acid and one of grape sugar. When its solution is taken into the system, or heated in the open air, the elements of grape sugar are oxydized into carbonic acid and water, and gallic acid is set free; and in this manner it has been supposed that gallic acid passes out of the blood into the secretions and exerts an astringent action at distant parts of the system. Headland remarks that as tannic acid loses weight by the decomposition, it follows that a dose of gallic acid produces a greater effect as a medicine than an equal amount of the former. We might also refer to the experiments of M. Pelletier, who found that a mixture of a solution of gallic acid with one of gum precipitates albumen, though neither of them affects it separately. But as gum has the same composition as grape sugar, and the latter is continually forming in the blood, Headland thinks it probable that gallic acid may act along with this saccharine matter in the circulating fluids, and thus acquire an astringent power, which it has not when employed externally; as the saccharine matter is required in the system for special purposes, the gallic acid passes out into the secretions alone. It is probable that tannic acid, if absorbed as such, of which some physiologists have doubted, is not decomposed, or changed into gallic or pyrogallic acids until it is about to be separated from the blood by

glandular action. This, however, is a point which requires further examination. If tannin is converted into gallic acid by oxidation, immediately on its absorption, it is difficult to explain its astringent action on chemical principles; and on the other hand if gallic acid is instantly converted into tannic acid on its introduction into the blood, by the presence of grape sugar it will not be easy to explain why it should prove more efficacious as an astringent than the latter. The following formula, however, shows how the elements of tannic acid may be constructed out of those of gallic acid and grape sugar:—

Tannic acid.— $C^{18} H^6 O^{10} + 2 \text{ aq.}$

Gallic acid.— $C^7 H O^3 + 2 \text{ aq.}$

Three equivalents of anhydrous tannic acid amount to six of gallic acid and one of grape sugar.



It is very easy to construct theoretic formula, to explain all the changes which food or medicine may be supposed to undergo in the human body; but whether they actually do occur or not, must always remain rather a matter of surmise and assumption, than of demonstration. But, however, the *modus operandi* may be, the fact is now generally admitted by practitioners that gallic acid is far more efficient as an internal astringent than tannic acid, while the latter only, possesses styptic properties.

Prof. Chadbourne on Cultivation of Medicinal Plants.

MESSEES. EDITORS.—I submit the following letter from Prof. Chadbourne, of William's College, on a subject which I lately discussed in your pages, viz., the "influence of cultivation, climate, soil, &c., on medicinal plants," which you will oblige your readers, probably, by laying before them. You will notice that he substantially confirms the views then presented; though, with myself, he considers that much remains to be settled by further experiments. Many facts have come to my knowledge since the article referred to was written, all going to prove that proper cultivation, in all cases, increases the medicinal properties of plants; that is, of those whose development is compatible with the climate, and this embraces, probably, nine-tenths, if not a larger propor-

tion, if we include the whole extent of the United States. There is every probability that senna, liquorice, rhubarb, buchu, opium, sarsaparilla, manna, arrowroot, jalap, scammony, colocynth, &c., may be produced in our southern, middle, and some of them in our northern states, and of as good quality as is now obtained from foreign sources. I shall feel obliged to any of your correspondents, for facts in regard to this subject. CHARLES A. LEE.

"BOWDOIN COLLEGE, February 22, 1859.

"My answer respecting the effect of cultivation on medicinal plants must be very brief on account of press of labors. I know of nothing in the history of cultivated plants justifying that sweeping generalization which some have made; that cultivation *always* injures the value of plants for medicinal purposes, by decreasing the amount of active principle. That this is true of *some* plants is well known; and that change of climate affects the amount of active principle is also well known. But what will be the result in a given case, must be decided by actual experiment. I know some consider it very unphilosophical to bring the consideration of "final causes" into any scientific discussion; but they have, nevertheless, been of great advantage, and it seems to me they may well be considered in connection with the history of cultivated plants.

"Plants have been changed, but in what different directions? Take the apple and rose—two plants belonging to the same natural order. Cultivation has changed the *fruit* of the apple, causing it to break up into untold forms—with almost every possible tint and flavor; no important change has been produced in its flower. The rose, on the other hand, becomes more beautiful *as a flower*. In the apple the original idea seems to have been *utility* in its fruit. In the rose, on the other hand, the *beauty of the flower* seems the main design of its creation. So fixed and so well understood are these two characteristics that no one expects any change from cultivation in these two plants, except improvement of fruit in the apple and of flower in the rose.

The potato and tomato plants of the same genus, might also be cited. No one expects by cultivation to cause the tomato to produce underground stems like potatoes, nor does he expect to cause the potato balls to develop into edible fruit like the tomatoes, though they correspond exactly in their relation to the plant. The potato improves in one direction—the tomato in another—each, as it seems to me, according to the leading idea in the creation of the plant. Examples might be multiplied to any extent. If this be a true principle we might expect that medicinal plants would be improved sometimes by cultivation, unless we adopt the notion that there is no plant in which the healing property is the leading idea. There is very great difference in plants, in their readiness to change by cultivation, and there is very much yet to be learned respecting the conditions under which the active principle of plants is increased or diminished.

But I think we know enough to say that cultivation does not *necessarily* decrease the quantity, but on the other hand, it may be increased. And this must be determined by experiment *on each plant, in each new place and under each new condition of cultivation*. This is the only philosophical course. And it is a subject of very great scientific as well as pecuniary interest. Climate cannot be controlled and that will limit the home of some species, but all else seems resolved into *methods of cultivation*, and there seems no reason to suppose that there may not be methods of cultivating successfully, medicinal, as well as nutritive plants.

Very truly yours,

P. A. CHADBOURNE."

Santonine.

(*Artemisia Santonica*.)

SANTONINE is prepared from the *artemisia santonica* or worm-seed, which does not consist of seeds, but of small globular, unexpanded flowers of the plant, mixed with broken peduncles and minute obtuse smooth leaves with greenish appearance, of strong aromatic odor increased by friction, and disagreeable taste. The plant is abundant in the Levant, and is much used as a vermifuge in those countries, and in many parts of Europe.

From ten to thirty grains were generally given in substance, mixed with sugar or milk; the dose being repeated at short intervals and followed by a purgative. The effects as might be expected were uncertain, but the evident power of the herb led to an investigation of the nature of its active principle; a resinous extract and an essential oil were obtained, but subsequently a *salt*, which is the principle now mostly employed as a vermifuge.

It was discovered and described by Kahler and Alms, and subsequently carefully investigated by Oberdörffer, and especially by Trommsdorff the younger. It was separated by Kahler, in 1830.

Methods of Preparation.—The process of M. M. Kochler was to treat the seed by sulphuric ether, and distill off the ether to obtain crystals; these were purified by solution in alcohol, to which a little hydrochloric acid had been added.

That of Merck consists of submitting the seed to the action of hydrate of lime and alcohol. Evaporating the tincture to one-fourth; filter to separate the resin, and treating it while hot with concentrated acetic acid. The santonine is deposited in crystals on cooling; it is purified by boiling it several times with alcohol and animal charcoal.

M. A. Guillemette macerates the seeds in cold water six hours; expresses; pulverizes the cake; macerates again for eighteen hours in cold water and expresses. The mass having been dried and pulverized is digested in alcohol of 89° for twenty-four hours, and expressed; this process is repeated until the seeds are exhausted. The alcoholic solutions are mixed and evaporated to three hundred and fifty grammes which is set aside to crystalize, and are purified by alcohol and charcoal.

M. Lecocq reduces one part of seed to coarse powder, and boils for fifteen minutes with ten parts of water, after which a sufficient quantity of slacked lime is added to render the liquor slightly alkaline; it is again boiled for ten minutes, strained and pressed, if the seed is not sufficiently exhausted, which may be ascertained by the hot pungent taste of the seed; it is again boiled with five quarts of water and a little slacked lime, strained and pressed; the united liquors are evaporated to the weight of the seed employed, placed in an earthen pot, allowed to cool, and then treated with an excess of hydrochloric acid. A fatty, resinous matter instantly separates in thick flakes which float, while the santonine is precipitated as an impalatable powder. Strain to separate the resinous matter; allow a days repose; the impure santonine is deposited; to purify this it is put into a porcelain capsule with two quarts of distilled water and boiled; fifty or sixty grammes of pulverized quick lime is added and the combination is effected in a short time. The liquor is filtered and decolorized by animal charcoal, and then treated by hydrochloric acid, which immediately precipitates the santonine; collect; wash well and dry in a dark room.

The difficulty experienced in procuring pure santonine, and on account of its high price induced M. Gaffard to endeavor to obtain from wormseed a product which may possess the advantages of the santonine, and at the same time be free from the objections to the crude article. He calls his the brown or impure santonine; his process is:—

Aleppo Wormseed,	- - - - -	3 Ounces.
Carbonate of Potash,	- - - - -	1 "
Slacked Lime, sifted,	- - - - -	$\frac{1}{2}$ "
Water,	- - - - -	3 to 3 $\frac{1}{2}$ Pints.

Boil the mixture for an hour; express through a linen cloth; settle, decant and add hydrochloric or nitric acid until it reddens litmus paper, without being sensibly acid to the tongue; allow it to rest; pass it through a filter; allow the product which remains on the filter to dry in the open air until it acquires the consistence of firm butter. This product is a mixture of santonine, resin, and essential oil, and answers for many of the forms in which practitioners wish to exhibit it.

The chemical properties of this substance are somewhat remarkable. According to M. Merck pure santonine is in brilliant, colorless elongated quadrilateral prisms, inodorous and tasteless.

"Santonine is in brilliant, colorless prisms, without taste or smell; when exposed to the rays of the sun it becomes yellow; is soluble in alcohol, and its solution, which is at first yellow, soon loses its color and furnishes the santonine as at first.

"When it is heated in a platina crucible it melts, and volatilises without being decomposed. The diluted acids have little action upon it; and although it is not acid, it forms real salts with alkaline and other bases, which salts are crystalizable, as those of lime, barytes and lead. These combinations take place with very remarkable phenomena. When a mixture of quick-lime, water, santonine and alcohol is heated, the fluid at first assumes a beautiful red color; on cooling, the calcareous salt crystalizes in needles of a silky appearance, losing its color from above downwards and at last becomes perfectly white. To purify this salt, it is to be dissolved in warm water, and the excess of lime precipitated by a current of carbonic acid gas. The calcareous combination is not decomposed by the carbonic acid, whilst that of lead is destroyed by mere exposure to the air.

"The red color is also produced when santonine is heated with barytes, ammonia, strontian, soda or potash, but only if alcohol be added; otherwise although the combinations are perfectly formed, they remain of a pure white.

When santonine, changed to a yellow by the effect of the sun's rays, is used in making these basic salts, the products are as white as if white santonine be used, but during the evaporation a yellow color is observed which disappears on cooling like the red tint spoken of above.

M. Liebig has not yet determined the atomic weight of the calcareous combination of santonine, but an analysis of it has furnished him with the following results:—

Carbon,	-	-	-	-	-	-	70.509
Hydrogen,	-	-	-	-	-	-	7.466
Oxygen,	-	-	-	-	-	-	22.025
							<hr/>
							100.000

Wachenroder found in the Levant wormseed :—

Volatile Oil,	-	-	-	-	-	-	00.39
Bitter matter,	-	-	-	-	-	-	20.25
Resinous bitter substance,	-	-	-	-	-	-	04.45
Green Resin,	-	-	-	-	-	-	06.05
Cerin,	-	-	-	-	-	-	00.35
Gummy extractive,	-	-	-	-	-	-	15.50
Ulmin,	-	-	-	-	-	-	08.60
Malate of lime with trace of Silica,	-	-	-	-	-	-	00.02
Woody fibre,	-	-	-	-	-	-	35.45
Earthy matter,	-	-	-	-	-	-	06.70

Subsequent analysis has given to Santonine the formula—
C.¹⁰ H.⁶ O.²

According to M. Calloud santonine is a specific poison for intestinal worms. He administered it to hundreds of infants with results that exceeded his expectations, and several physicians to whom he distributed it obtained similar results.

M. Mialhe says :—"Santonine constitutes without doubt a medical agent destined to render most important services; being nearly insipid, it will be generally preferred to the volatile oil of *semen contra*, the bitterness of which is such that few infants can bear it; but it may be said, since this stearopten has no decided taste, since it is scarcely soluble in water, how is it possible that it can possess a so decided deleterious action on these parasites? Nothing is so easy as to answer this question. Santonine, it is true, is nearly insoluble in water, but it becomes soluble in every proportion in the presence of an alkali. The liquid contained in the portion of the intestinal canal in which the parasites in question ordinarily occur, has a very distinct alkaline reaction; it has therefore, the power of rendering this substance soluble, and consequently active. I may, moreover, observe, that the property which santonine possesses of being soluble and absorbable only in the inferior portion of the alimentary canal, renders its efficaciousness more certain. In fact, every good anthelmintic agent must necessarily belong to the class of bodies which are little or not at

all absorbable in the stomach. Why, for instance, do a few centigrammes of calomel constitute a vermifuge far more certain in its effects than a quantity of corrosive sublimate, equal to that which would result from the partial transformation of the protochloride of mercury into the bichloride, under the influence of the alkaline chlorides contained in our secretions? It is because a weak dose of corrosive sublimate, administered as such, is absorbed in the *primæ viæ*, while the partial transformation of the calomel into sublimate takes place throughout the whole extent of the digestive canal, which enables the poison to attain the intestinal worms in whatever portion of the canal they may be situated."

Dr. Wells, surgeon of the Royal Navy says: "The experience of medical men with whom I have conversed, and my own observation, have convinced me that this salt would be a most valuable addition to our pharmacopœia. Many think its effects more certain upon lumbrici than upon tænia, but I have found it equally efficacious in both. The dose for an adult is from five to eight grains, and for a child from two to four, given as a powder in sugar or preserve, at bed-time, and washed down by a glass of water. In many cases the worms are passed on the following morning, but not unfrequently it is necessary to give a second dose on the succeeding evening. I have not yet found more than the second dose required. In Corfu it is usual to combine the santonine with a moderate dose of calomel, and to follow it up by a saline aperient; but I have not done so, as I thought the trials of the real power of the salt itself would thus become less satisfactory. Very little griping is produced, and the worms are passed dead. If the dose exceed five grains in an adult, a curious effect upon the retina is produced—the patient, for an hour or more, occasionally seeing all objects tinted green or yellow, as though he was looking through colored spectacles. No visible change in the eye can be detected in such cases. In two persons I have seen the urine very highly colored for a few hours. The men to whom I administered it were strong seamen or marines, and some of them, who had previously taken turpentine on different occasions, said they thought the new medicine equally or more effectual, far less unpleasant to take, and less painful in operation. Forming a small and almost tasteless powder, it is peculiarly adapted to children."—(*To be continued.*)

Twelfth Annual Meeting of the American Medical Association.

THE association met on Tuesday, May 3d, at eleven o'clock, A. M., in Mozart Hall, the president, Dr. Harvey Lindsly, of the District of Columbia, in the chair, supported by Drs. W. L. Sutton, of Kentucky, Thomas O. Edwards, of Iowa, Josiah Crosby, of Massachusetts, and W. C. Warren, of North Carolina, as vice presidents, with Drs. Alexander J. Semmes, of the District of Columbia, and S. M. Bemiss, of Kentucky, acting as secretaries. Dr. Caspar Wistar, of Penn., treasurer, was also in attendance.

The president announced the Rev. Mr. Robinson, of Louisville, who opened the proceedings with prayer.

Dr. Robert J. Breckenridge, chairman of the committee of arrangements, then welcomed the delegates to the city.

Prof. Joshua B. Flint, of Louisville, accompanied by Drs. Sutton, Chipley, Spillman and Snead, all ex-presidents of the association, then came forward and presented a resolution of welcome from the state medical society of Kentucky, and in behalf of the state society, in a neat and appropriate address welcomed the president and members of the association as guests of their Kentucky brethren.

The secretary, Dr Bemiss, then called the roll of members of the association, and the following gentlemen were in attendance:—

DIST. OF COLUMBIA.

Harvey Lindsly,
Cornelius Boyle,
Alex. J. Semmes.

VIRGINIA.

L. S. Joynes,
P. C. Spencer,
A. S. Payne.

GEORGIA.

Henry F. Campbell,
Joseph Jones,
W. H. Doughty,
J. T. Banks,
A. G. Thomas,
John W. Jones,
J. G. Westmoreland,

LOUISIANA.

S. O. Scruggs,
R. A. New.

MARYLAND.

G. W. Lawrence.

SOUTH CAROLINA.

Henry R. Frost,
H. W. Gibbs,
John F. Gaston,
W. H. Huger,
Francis J. Miles,

PENNSYLVANIA.

Caspar Wistar,
Robert K. Smith,
James Bryan,
W. B. Atkinson,
Frank Riesor,
William Hunt,
John Shrack,
D. D. Clarke,
W. W. Townsend,
Caleb Swayne.

RHODE ISLAND.

James H. Eldridge.

OHIO.

Thomas W. Gordon,
A. H. Baker,
W. W. Dawson,
Thomas M. Taggart,
H. E. Foote,
John C. Beck,
O. G. Comegys,
S. P. Hunt,
James Graham,
B. F. Richardson,
T. J. Mullen,
J. B. Smith,
Robert Thompson,
Charles S. Tripler,
Stephen Bonner,
John A. Murphy,

E. P. Tyffe,
Daniel Tilden,
J. Helmick,
George Fries,
A. E. Helghnay,
Joseph Clements,
J. G. Rodgers,
H. G. Cary,
William Mount,
O. McDermott,
R. L. Rea,
W. H. Lamme,
B. S. Brown,
G. A. Dougherty,
J. O. Devise,
George Mendenhall,
S. G. Armor,
E. B. Stevens,
L. G. Leckilder,
W. L. Schneck,
J. P. Judkins,
D. B. Cotton,
W. F. Kincaid,

John Davis,

W. C. Hull,
W. B. Davis,
P. H. Kelley,
Usher P. Leighton.

NEW YORK.

Lewis A. Sayre,
Thomas W. Blatchford,
David Meredith Reese,
J. Carey Selden,
A. L. Saunders,
Douglas Bly,
David L. Rogers,
Daniel G. Thomas,
John L. Zabriskie,
M. M. Marsh,

TENNESSEE.

John H. Callender,
J. C. Newnan,
James M. Keller,
G. C. E. Weber,
H. R. Robards,
J. S. White,
W. K. Bowling,
E. B. Haskins,
F. Rice,
J. B. Lindsly,
T. L. Maddin,
D. F. Wright,
W. C. Cavanaugh,
R. C. Foster,
E. D. Wheeler,
B. W. Arrant,
W. D. Haggard,
Paul F. Eve,
J. M. Brannock,

KENTUCKY.

J. W. Singleton,
N. B. Anderson,
H. K. Fusey.

Churchill J. Blackburn,
W. H. Miller,
R. C. Hewitt,
John L. Dismukes,
J. B. Flint,
John Hardin,
W. A. Turner,
M. Goldsmith,
Llewellyn Powell,
G. W. Bayless,
L. P. Yandell,
David Cummins,
B. M. Wible,
A. B. Cooke,
D. W. Yandell,
D. D. Thomson,
R. J. Breckenridge,
B. M. Bemis,
John B. Cook,
Henry Miller,
T. P. Satterwhite,
G. W. Ronald,
Lewis Rogers,
J. Hopson,
J. Q. A. Foster,
L. Russell,
Hugh L. Givins,
O. H. Spillman,
H. D. Strman,
N. B. Marshall,
E. D. Force,
T. S. Bell,
R. P. Letcher,
A. Callaway,
R. D. Weatherford,
J. L. Landrum,
D. J. O'Reilly,
Samuel Reid,
John H. Polln,
W. S. Chipley,
W. D. Holt,
W. E. Gilpin,
A. E. Stuart,
Wm. Hayes,
Thomas Marshall,
W. L. Sutton,
O. P. Mattingly,
Stanton F. Bryan,
J. W. Bush,
H. M. Skillman,
L. Buckner Todd,
W. E. Evans,
W. C. Snead,
W. B. Caldwell,
W. H. Gardner,
E. O. Brown,
S. B. Richardson,
A. H. Shively,
F. G. Montgomery,
J. A. Hodge,
W. W. Cleaver,
Hugh Berkley,
S. B. Field,
W. N. Garther,
Ed. Richardson.

MICHIGAN.

Moses Gunn,
Z. Pitcher,
Wm. Bredie,
John Bennet,

DELAWARE.

H. F. Askew.

NEW JERSEY.

Landon A. Smith,
E. Fithian,
Joseph Fithian,
Alex. N. Dougherty,
Abraham Coles,

NEW HAMPSHIRE.

Dixi Crosby.

ALABAMA.

George D. Norris,
J. E. Coons,
W. F. Reese,
A. J. Reese,
J. N. Turney.

NORTH CAROLINA.

Edward Warren.

MISSOURI.

Montrose A. Pullen,
J. M. Allen,
John H. Watters,
Joseph N. McDowell,
Stephen Ritchie,
M. L. Linton,
J. E. Washington,
Chas. A. Pope,
W. M. McPheeters,
J. M. Allen,
F. S. Fraser.

WISCONSIN.

C. B. Chapman.

IOWA.

D. L. McGugin,
Thos. O. Edwards,
Daniel Meeker,
Wm. Watson.

INDIANA.

Charles Fishback,
B. S. Woodworth,
W. R. Winton,
Calvin West,
Isaac Capelberry,
J. N. Green,
R. D. Maury,
Geo. Sutton,
Isaac Mendenhall,
M. H. Hardin,
L. D. Personett,
A. B. Butler,
R. E. Houghton,
D. W. Taylor,
S. S. Boyd,
J. H. Brower,
A. McPheeters,
J. Langes,
Joel Pennington,
L. H. Kennedy,
J. Joel Wright,
H. G. Sexton,
Joseph Somers,

John Moffit,
D. Morgan,
H. P. Ayce,
Wm. Dickey,
D. H. Jessup,
Joseph H. D. Rogers,
Benj. Newland,
John Sloan,
T. R. Austin,
R. R. Town,
A. Clapp,
F. W. Beard,
Wm. Reeder,
D. M. Jones,
Chas. Bowman,
R. S. Shield,
John M. Kitchen,
B. Davis,
George W. New,
J. H. Woodburn,
B. M. Linton,
O. Brown,
A. G. Boynton,
F. M. Mothershead,
T. Bullard,
W. A. Clapp,
W. W. Hitt,
A. J. Mullen,
Jno. M. Hinkle,
J. D. Maxwell,
Jno. M. Reilly,
J. A. Windle,
B. O. Rowan,
L. Ritter,
R. Curran,
J. W. Davis,
W. T. S. Cornett,
A. V. Talbot.

MASSACHUSETTS.

Pierson F. Kendall,
G. Shattuck,
Benj. F. Heywood,
Sol. D. Townsend,
Josiah Crosby,
J. B. Upham,
Enos Hoyt,

ILLINOIS.

J. W. Fruer,
Daniel Brainard,
N. S. Davis,
R. N. Isham,
J. H. Hollister,
H. A. Johnson,
D. W. Young,
O. Goodbrake,
H. Noble,
J. M. Steele,
A. H. Ince,
J. N. Graham,
J. B. Ourtis,
F. B. Haller,
H. Nance,
Thomas Wilkins,
T. D. Fitch,
C. Johnson,
D. O. McCord.

UNITED STATES ARMY.—Charles S. Tripler.

The president then appointed the following gentlemen a committee on voluntary essays:—Drs. L. P. Yandell, of Kentucky, Bryan, of Philadelphia, and Comegys, of Ohio.

Dr. R. J. Breckinridge, from the committee of arrangements announced the hours of business from 9 A. M. to 12 M., and from 3 P. M. until such hour as the convention should adjourn upon resolution, which arrangement was adopted.

Dr. Harvey Lindsly, the president of the association, then read his retiring address, which was listened to with marked attention, and was an eloquent tribute to the dignity of the medical profession and the importance of its improvements.

After he had concluded, Dr. L. A. Smith, of New Jersey, moved that the thanks of the association be tendered to the president for his able and eloquent address, and it was ordered to be placed in the hands of the appropriate committee for publication, among the proceedings of the meeting.

Dr. Caspar Wistar, chairman of the committee on publication, read the annual report, and on motion of Dr. Sayres, of New York, the following resolutions appended to it were unanimously adopted:—

Resolved, That hereafter every paper intended for publication in the Transactions must not only be placed in the hands of the committee of publication by the 1st of June, but it must also be so prepared as to require no material alteration or addition at the hands of the author.

Resolved, That authors of papers be required to return their proofs within two weeks after their reception, otherwise they will be passed over and omitted from the volume.

Adjourned until three o'clock, P. M.

AFTERNOON SESSION.

Dr. W. L. Sutton, one of the vice-presidents, took the chair in the absence of the president.

Dr. D. Meredith Reese, of New York, chairman of the committee on nominations, reported the following officers for the ensuing year:—

President—Henry Miller, of Kentucky. *Vice Presidents*—H. F. Askew, Delaware; Chas. S. Tripler, U. S. Army; L. A. Smith, New Jersey; Calvin West, Indiana. *Treasurer*—Caspar Wistar, Pennsylvania. *Secretary*—S. M. Bemiss, Kentucky.

Dr. Sayre moved the adoption of the report, which was unanimously agreed to.

Dr. Brainard, of Illinois, moved the appointment of a committee to conduct the newly appointed officers to their respective chairs. The acting president selected Drs. Brainard, of Ill., Mattingly, of Ky., Sutton, of Ind., McDowell, of Mo., and R. J. Breckinridge, of Ky., and they accordingly performed the duties assigned to them.

The newly elected president, on taking the chair, addressed the convention in substance as follows:—

GENTLEMEN OF THE AMERICAN MEDICAL ASSOCIATION:—I am wholly at a loss to command language to express the deep sense of obligation put upon me by calling me to the Presidency of your Association. It is an honor any man may well be proud of, and although, I admit, in all sincerity, that you might without difficulty have selected an individual more worthy the position, I may be allowed to say you could not have conferred it upon one who would prize it more highly, or cherish it longer with the most grateful recollection. I do esteem it the greatest honor ever conferred upon me by the profession that I love, and to which I have devoted a long life; nay, more—it is the greatest honor that could be conferred upon any man by the medical or any other profession in this or any other country; for any decoration of honor or any mark of approbation conferred by a crowned head, I should regard as a bauble in

comparison. Who are you, gentlemen, when rightly considered? You are the rightful representatives of the great American Medical Profession—an army forty thousand strong, and a body of men, no matter what captious criticism may say in disparaging comparison with the European branch of the profession, in my humble judgment, far superior to the same number of medical men to be found in any quarter of the globe. Although, as a body you may not be so learned, so critically and nicely framed in all the minutiae of the profession, yet for strength, integrity, and precision in all the great principles guiding to a successful combat with disease, this body is equal if not superior to that of any kingdom of continental Europe.

To be called to the presidency of such a body of men is in my sober judgment the greatest compliment that could be conferred on mortal man, provided that man is a devotee of medicine, who has given his whole mind, soul, heart, and strength individually to the profession, and has that high regard for it which will not suffer any less noble pursuit to interfere with the daily though laborious duties of the profession. Coming so recently from a sick bed, and still enfeebled in health, I beg to be excused from further remarks and desire you to accept this brief and imperfect acknowledgement of the distinguished honor conferred upon me, instead of what, under other circumstances, I might be disposed to say.

The president, after this grateful address, sat down amid much applause, when Dr. R. J. Breckinridge moved that the thanks of the association be tendered to the retiring officers for the faithful and assiduous manner in which they have conducted the business committed to their charge, which was unanimously adopted.

A long and discursive debate then ensued on the admission of members by invitation. The plan of organization permits practitioners of respectable standing from sections of the United States not otherwise represented at the meeting, to receive appointment, by invitation of the meeting after an introduction from any of the members present, or any absent permanent members, to hold connection with the association until the close of the annual session at which they are received, and to be entitled to participate in all its affairs, as in the case of delegates. The point of difficulty seemed to be whether the invitations should be extended by the committee of arrangements or by open vote of the association. It was finally settled by referring all the applicant's names to the committee on arrangements.

Dr. J. B. Lindsly, of Tennessee, offered the following:—

Resolved, That a committee of three be appointed by the chair to inquire into and report upon the propriety of dividing the Association into sections, for the purpose of performing such part of its scientific labors as may relate to particular branches of medicine and surgery.

Dr. Brodie moved its reference to the nominating committee.

Dr. Brainard explained at some length the object of the resolution of inquiry, and enforced its adoption as the means of giving more effect and usefulness to the proceedings of the association, the reports of which had heretofore gone out unmaturing, in consequence of the want of concentrated action.

A motion by Dr. Sayre to lay the motion on the table was negatived, and the motion of Dr. Lindsly was then adopted.

Dr. Davis moved that no person be permitted to speak more than twice on the same subject, or more than ten minutes at one time, except by consent of the association, which was adopted.

The standing committee on prize essays was called on for their report, but without a response. This was also the case with the committee on medical education. The committee on medical literature had no report to present.

A letter from Dr. J. G. F. Holston, of Ohio, chairman of the special committee on the microscope was read, reporting progress and begging a continuance for more extended investigation, which was referred to the committee on nominations.

A letter from Dr. Stephen Smith, of New York, from the special committee on medical jurisprudence had the same reference.

The special committee on quarantine was not ready to report.

Dr. Mattingly, of Kentucky, from the special committee on diseases and mortality of boarding schools, asked a continuance until next year, in order to obtain further information requisite to the full investigation of the important subject. The request was referred to the committee on nominations.

The special committees on surgical operations for the relief of defective vision, on milk sickness, and on the blood corpuscle had the same reference.

A report from the committee on medical ethics, signed by Dr. John Watson, of New York, was read, laid on the table, and made the special order for to-morrow at 12 o'clock M.

Continuances were asked by the committees on the pons varolii, medulla oblongata, and spinal marrow—their pathology and therapeutics; on American medical necrology; on the hygienic relations of air, food and water the natural and artificial causes of their impurity, and the best methods by which they can be made most effectually to contribute to the public health; on the effect of the virus of rattlesnakes, &c., when introduced into the system of the marmalaria; on the climate of the Pacific coast and its modifying influences upon inflammatory action and diseases generally; on the constitutional origin of local diseases, and the local origin of constitutional diseases; on the physiological effects of the hydro carbons; on epilepsy; on the causes of the impulse of the heart, and the agencies which influence it in health and disease, and on the best substitutes for cinchona, and its preparations in the treatment of intermittent fevers, &c., all of which were referred to the committee on nominations.

The special committee on government meteorological reports, made a report written by Dr. R. H. Coolidge, of the U. S. Army, but read by Dr. Paul F. Eve, of Tennessee, which was referred to the committee on publications.

The committee appointed in May, 1857, on criminal abortion, submitted a report, written by Dr. Storer, of Boston, which was read by Dr. Blatchford, of New York, and referred to the committee on publication. The following resolutions appended to this report were unanimously adopted:—

Resolved, That while physicians have long been united in condemning the act of producing abortion, at every period of gestation, except as necessary for preserving the life of either mother or child,

It has become the duty of this Association, in view of the prevalence and increasing frequency of the crime, publicly to enter an earnest and solemn protest against such unwarrantable destruction of human life.

Resolved, That in pursuance of the grand and noble calling we profess—the saving of human lives—and of the sacred responsibilities thereby devolving upon us, the Association present this subject to the attention of the several legislative assemblies of the Union, with the prayer that the laws by which the crime of procuring abortion is attempted to be controlled may be revised, and that such other action may be taken in the premises as they in their wisdom may deem necessary.

Resolved, That the Association request the zealous co-operation of the various State medical societies in pressing the subject upon the legislatures of their respective States, and that the president and secretaries of the Association are hereby authorized to carry out by memorial these resolutions.

The convention then adjourned till Wednesday morning at nine o'clock.

SECOND DAY.

The president, Dr. Miller, called the Association to order at nine o'clock.

Dr. D. Meredith Reese, chairman of the committee on nominations, called attention to the fact that the committee could not act definitely until the place for next year's meeting should be designated. He also stated that the State medical society of Connecticut had requested that an amendment to the constitution proposed two years since should be taken from the table, relative to the time of meeting.

It was moved by Dr. Blatchford and seconded by Dr. Sayre, that the amendment to the third article of the constitution be taken up, which proposes to add after the words "first Tuesday of May" the words "or first Tuesday of June," and after the words "shall be determined" add the words "with the time of meeting."

The amendment was adopted by a constitutional vote.

Dr. D. M. Reese also stated that the Connecticut State society had extended a pressing invitation to the association to hold its next meeting at New Haven, which invitation was referred to the committee on nominations.

Dr. Reese also called attention to the necessity of some radical change in the mode of appointing committees to prepare treatises on scientific subjects to be reported at the annual meetings. It had been seen, that, on yesterday, a large majority of the committees made no reports and did not even see proper to send in any communication explanatory of delay. The difficulty heretofore has originated in the mode of selection adopted by the nominating committee. It has been customary for gentlemen to hand in their names and the proposed subjects on slips of paper, and the committee without further investigation, have so published in the annual reports. Thus it has happened that appointments have been most injudiciously made, and gentlemen to whom a special duty has been assigned have been found to know less of that than any other subject. He therefore hoped that no committee of last year would be reappointed or continued from which no report had been had, and no communication received.

On motion, the nominating committee was unanimously instructed to act upon the suggestions of the chairman, who also stated that there should be some definite expression of disapprobation as to the course of those gentlemen who had volunteered essays and had their names reported in the newspapers and spread over the land, and then paid no further attention to the matter.

Dr. Flint, from the committee on prize essays, begged leave to report that they received four dissertations in time for a careful and thorough examination; and two others, quite voluminous, only two days before the meeting of the Association. The latter we have felt constrained to exclude altogether from the competition of the present year, on account of the absolute impossibility of reading them with a critical purpose and effect. The others have been carefully examined by all the surviving members of the committee—one estimable associate, Dr. Evans, having been called from all his earthly labors before the active duties of the committee began.

More than one of the four essays we examined exhibited much labor, and a commendable scholarship in their preparation—are voluminous, and in some respects very meritorious papers; but, in the unanimous judgment of the committee, neither of them possesses the degree and species of merit which should entitle its author to the Association prize.

The committee beg leave, furthermore, to report, that in their opinion and as the suggestion of their own recent experience, the association should determine in more precise and formal manner than has yet been done the terms and conditions of competition and of success in the contest for prizes, for the government alike of contestants and the committee of adjudication, and that a committee be now appointed to consider and report upon that subject.

Dr. J. B. Lindsly, chairman of the committee appointed to inquire into the propriety of dividing the Association into sections, for the better performance of its work in considering the various branches of medicine and surgery, recommended the adoption of such a plan as being indispensably necessary to making this body a working scientific association. They do not deem it necessary to enter into any argument in favor of this plan, it being the one already universally adopted by similar bodies. They would simply recommend, for the present, a division into the following sections, as being most suitable to facilitate the transaction of business, viz:—

1. Anatomy and Physiology.
2. Chemistry and *Materia Medica*.
3. Practical Medicine and Obstetrics.
4. Surgery.

The committee do not propose that this subdivision of labor shall in any manner interfere with the regular business of the Association as now conducted; but only that after having assembled each day in general session, each section shall meet separately for the purpose of hearing and discussing papers on such subjects as properly belong to them, and they, therefore, recommend that the committee of arrangements for the ensuing year be requested to provide suitable accommodations for the services of these sections, and that each of said sections shall be authorized to make such arrangements as may be required for the proper transaction of its business.

This report was considered and adopted after a very able speech in its support by Dr. Davis.

Dr. J. W. Singleton, of Kentucky, moved the suspension of the rules for the introduction of the following:—

Resolved, That in the death of Dr. A. Evans, of Kentucky, the Association has lost one of its most manly and efficient members, and society a friend and benefactor.

The resolution was unanimously adopted.

Dr. W. L. Sutton, under the resolution appointing a committee on registration of births, marriages, &c., proposed a plan of general action, an abstract of which he read on motion of Dr. Gibbs, of S. C., and on motion of Dr. L. P. Yandell, the subject was referred to a committee to report during the present session.

Drs. Sutton, Lindsly, W. R. Gibbs, Bryan, Pitcher, and Crosby were appointed such committee.

Dr. Blatchford stated that he had received from Dr. Willard, secretary of the New York State medical society, fifty volumes of their transactions for 1859, for distribution to the medical press, the medical colleges, and all medical societies of the south, and sent with a request for an interchange of civilities. Gentlemen present can be supplied by application to Dr. Bemiss, and if the number sent be not sufficient for the supply they will be cheerfully forwarded to any gentleman, by application to the secretary, Dr. S. D. Willard, Albany, N. Y., the postage being included in the application, which is twenty-two cents.

A voluminous report from Dr. Thomas Logan, of California, on medical topography and epidemics, was received and referred to the committee on publications.

The chairman of the committee on voluntary essays, stated that he had received a paper on a case of extra-uterine foetation from Dr. Enos Hoyt, of Transylvania, Mass.; and another on a case of accidental poisoning by strychnine, from Dr. Douglas Bly, of Rochester, N. Y. He also presented a very voluminous paper entitled "observations on some of the changes of the solids and fluids in malarial fever, by Joseph Jones, Professor of medical chemistry in the medical college of Georgia, at Augusta." By request, Prof. Jones gave a verbal abstract of his paper and an exposition of his theory, and on motion of D. W. Yandell the communication was referred to the committee on publications.

Dr. D. W. Yandell announced that the following railroad companies had agreed to pass delegates to this convention over their roads at half-price:—Pittsburgh, Fort Wayne and Chicago; Pennsylvania Central; Jeffersonville; New Albany and Salem; Louisville and Nashville, and Cleveland and Pittsburg.

On motion, a vote of thanks was tendered to these companies for their liberality.

Dr. J. B. Flint offered the following resolution:—

Whereas, our brethren of Great Britain are engaged in erecting a monument to the memory of John Hunter, whose invaluable services in behalf of Physiology and Surgery are recognized and honored, as well on this side of the Atlantic as in Europe; and whereas, this Association, as the representatives of American medicine, would rejoice in some suitable manner to participate in so grateful a testimonial of gratitude and respect; therefore,

Resolved, That a committee of three be appointed to consider in what manner this participation can best be effected so as to be acceptable to our British brethren, and consistent with our own means and opportunities of action, with instructions to report at the next annual meeting.

The resolution was adopted, and Drs. Flint, Bowditch and Shattuck were appointed as the committee.

Dr. Harvey Lindsly offered the following:—

Whereas, Parliamentary rules of order are numerous, complicated, sometimes obscure, and often inapplicable to such a body as the American Medical Association; and whereas, from the nature of the pursuits of medical men, they cannot be familiar with these rules. Therefore,

Resolved, That a select committee of three members be appointed to prepare a system of rules for the government of this Association, as few in number, as concise and as perspicuous as possible, to be reported to the next annual meeting.

This resolution was adopted, and Drs. Lindsly, Comegys, and Blatchford appointed as the committee.

The paper of Dr. Bly, on accidental poisoning by strychnine, was read by its author, and as individual cases are not reported in the journals of the association, thanks were returned for the communication, with a request that it be published in some medical journal.

An invitation from grand master Morris, of the Masons, was received, urging medical brethren to attend the Masonic convention now in session in this city.

The nominating committee made the following report:—

The next annual meeting to take place at New Haven, on the first Tuesday of June, 1860. Dr. Eli Ives is elected junior secretary.

Committee of arrangements—Drs. Chas. Hooker, Stephen G. Hubbard, and Benjamin Sullivan, Jr., with power to add to their numbers. Committee on prize essays—Drs. Worthington Hooker, Conn.; G. C. Shattuck, Mass.; Usher Parsons, R. I.; P. A. Jewett, Conn.; and John Knight, Conn. Committee on publication—Drs. F. G. Smith, Philadelphia, Pa.; Wistar, do.; Bemiss, Louisville, Ky.; Ives, New Haven, Conn.; Hollingsworth and Hartshorne, Philadelphia, Pa.; and Askew, Wilmington, Del. Committee on medical literature—Drs. Henry Campbell, Ga.; D. F. Wright, Tenn.; O. Wendell Holmes, Mass.; S. G. Ormer, Ohio; and W. H. Byford, Ill. Committee on medical education—Drs. D. M. Reese, N. Y.; W. R. Bowling, Tenn.; Charles Fishback, Ind.; John Bell, Penn.; Z. Pitcher, Mich.

The following special committees were appointed:—

On morbus, coxarius, and surgical pathology of articular inflammation—Dr. Lewis A. Sayre, of New York. On the surgical treatment of strictures of the urethra—Dr. James Bryan, of Philadelphia. On drainage and sewerage of large cities, their influence on public health—Drs. A. J. Semmes, D. C., chairman, Cornelius Boyle, and G. M. Dove. On the periodicity of diseases prevailing in the Mississippi valley—Dr. J. W. Singleton, of Smithland, Ky. On puerperal tetanus; its statistics, pathology, and treatment—Dr. D. L. McGugin, of Keokuk, Iowa. On hospital epidemics—Dr. R. K. Smith, of Philadelphia. On puerperal fever—Dr. J. N. Green, of Stellisville, Ind. On anæmia and chlorosis—Dr. H. P. Ayres, of Fort Wayne, Ind. On veratrum viride—Dr. James B. McCraw, of Richmond, Va. On alcohol; its therapeutical effects—Dr. J. R. W. Dunbar, of Baltimore, Md. On meteorology—Dr. J. G. Westmoreland, Atlanta, Ga. On milk sickness—Dr. Robert Thompson, Columbus, Ohio. On manifestations of disease of nerve centres—Dr. C. B. Chapman, Wisconsin. On the medical topography of Iowa—Dr. T. O. Edwards, Iowa. On microscopic observations on cancer cells—Dr. George D. Norris, New Market, Ala. On the philoso-

phy of practical medicine—Dr. James Graham, Cincinnati, Ohio. On some of the peculiarities of the North Pacific, and their relations to climate—Dr. W. H. Doughty, Georgia. The following special committees were continued or altered:—

On microscope—John C. Dalton, Jr., N. Y.; David Hutchinson, Ind.; A. R. Stout, Cal.; Calvin Ellis, Mass.; Christopher Johnson, Md. On diseases and mortality of boarding schools—Dr. C. Mattingly, Ky.; and Dixie Crosby, N. H. On the various surgical operations for the relief of defective vision—Drs. M. A. Pullen, Mo.; T. J. Cogley, Ind.; and W. Hunt, Penn. On the blood corpuscle—Dr. A. Sayre, Michigan. On American medical necrology—Dr. C. C. Cox, Maryland. On the hygienic relations of air, food, and water—the natural and artificial causes of their impurity, and the best methods by which they can be made most effectually to contribute to the public health—Dr. C. C. Cox, Md. On the effect of virus of rattlesnake, etc., when introduced into the system of mammalia—Dr. A. S. Paine, Virginia. On the climate of the Pacific coast and its modifying influences upon inflammatory action and diseases generally—Dr. O. Harvey, California. On the constitutional origin of local diseases, and the local origin of constitutional diseases—Drs. W. H. McKee, North Carolina, and C. F. Heywood, New York.

On motion of Dr. Brodie, Dr. A. J. Semmes was requested to serve as secretary pro tem., during the remainder of the session.

The association took up the special order, being the report on medical ethics to which had been referred the action of the Dubuque medical society; which, after debate, was laid over until twelve o'clock to-morrow.

On motion of Dr. H. F. Campbell, a section of meteorology, medical topography, and epidemic diseases, and of medical jurisprudence and hygiene, was added to those already adopted by this association.

Amendments to the constitution of the association were then taken up, and a provision acted upon that no individual who shall be under sentence of expulsion or suspension from any State or local medical society, of which he may have been a member, shall be received as a delegate to this body, or be allowed any of the privileges of a member until he shall have been relieved from such sentence by such State or local society. This amendment to the constitution was adopted.

The next amendment, lying over from last year, was the proposition of Dr. Kyle, of Ohio.

That the constitution of the association be so amended as to prohibit the admission as a delegate or the recognition as a member of any person who is not a graduate of some respectable medical college.

This amendment was rejected; but, on the question of re-consideration, a long and animated debate ensued, which called forth all the oratorical abilities and much of the personal feelings of the delegates. Without arriving at a vote, the association adjourned for dinner.

AFTERNOON SESSION.

Upon the re-assembling of the association, the discussion was renewed on the motion to re-consider the vote by which the amendment to the constitution was negatived, prohibiting the admission as a delegate or the recognition as a member of any person who is not a graduate of some respectable medical college.

Dr. Kincaid moved a further amendment to insert the word "hereafter," after "prohibiting."

Dr. Askew, of Delaware, one of the vice presidents in the chair, ruled the amendment out of order at the present stage, or until the association decide upon the question of re-consideration.

After a long discussion, Dr. Davis, of Ind., moved to lay the motion to reconsider on the table, which was carried; 97 yeas, nays not counted, so the amendment stands registered.

The next proposed amendment to the constitution was that suggested by the New Jersey medical society, asking for such changes as would establish a board of censors in every judicial district of the supreme court, who should examine and grant diplomas to all proper members of the association.

This was temporarily laid on the table for Dr. Crosby to offer a report of the medical teacher's convention which met on Monday last. He strongly recommended a committee from this body to confer with the teacher's committee, and felt great confidence that something beneficial to medical education would be the effect of such conference.

Dr. Comegys moved the appointment of a committee of five to confer with the committee of medical teachers, and report at the next annual meeting, provided that no medical teacher be selected on the part of this association.

This again gave rise to an excited debate, clearly showing that there was a great deal of bad feeling between the professors and the laymen of the profession. Prof. McDowell, of Missouri, was extremely happy in some of his hits and kept his auditors in a roar of laughter. He acknowledged that Philadelphia and New York had the advantage of location; the railroads took students there as they did the horses and cattle of the West, and sometimes its asses.

Prof. Crosby, of Dartmouth college, contended that the elevation of the standard of medical education depended more upon practitioners than the colleges; if bad materials were sent up from physicians' offices for professors to model into physicians, it could not be expected that good results would follow. He wanted a committee of conference, not based on any sectional feelings, and he believed the whole matter could be arranged satisfactorily.

Dr. D. W. Yandell wished to reply to one remark of Prof. Crosby, as to the bad materials sent by private teachers to the colleges. He had himself rejected students who were too big fools to be made physicians, and these same persons, in a few months, had gone to some of the colleges and come back with their diplomas in their pockets. After a very eloquent, appropriate, and conciliatory speech from Dr. Davis, the resolution of Dr. Comegys was unanimously adopted.

The resolutions from the New Jersey medical society were then taken from the table and referred to the committee of conference.

Dr. Davis offered a resolution instructing the same committee to confer with the State medical societies for the purpose of procuring more decisive and uniform action throughout the profession, in carrying into effect the standard of preliminary education, adopted by this association at its organization in 1847. This was carried.

Dr. Gibbs, from the committee to examine into a plan of uniform registration of births, marriages and deaths, offered the following report:—

They have given the same a careful consideration, and they unanimously recommend that the report be adopted and referred to the committee on publication.

They also recommend that the same committee be continued, with instructions to add to the report in time for publication in the ensuing volume of transactions, a form of registration law which may be likely to answer the requirements of the several states.

Dr. Sayre, of New York, offered the following.—

Whereas, The medical profession at large have an interest in the character and qualifications of those who are to be admitted as their associates in the profession; therefore,

Resolved, That each State medical society be requested to appoint annually two delegates for each college in that State, whose duty it shall be to attend the examination of all candidates for graduation; and that the colleges be requested to permit such delegates to participate in the examination and vote on the qualifications of all such candidates.

This was referred to the committee of conference.

The paper of Dr. Jones, presented at the morning session, was taken from the committee on publication and referred to the committee on prize essays

Dr. Eve moved to record the name of Dr. Benj. W. Dudley, as a permanent member, which was adopted by a unanimous vote, the delegates all rising to their feet in token of respect.

The following gentlemen have been admitted to the association as members by invitation:—

INDIANA.
B. C. Rowan,
N. D. Field,
John S. Rowe,
R. Curran,
D. Wiley,
J. A. Windle,
A. V. Talbot,
J. W. Davis.

OHIO
W. C. Hall,
N. B. Davis.
TENNESSEE.
J. M. Braddock.
KENTUCKY.
W. N. Garther,
S. B. Fields,
W. S. Cain,

J. A. Hodge,
S. B. Merrifield,
Joshua Gore,
H. M. Berkely,
MISSOURI.
J. M. Allen,
ALABAMA.
Dr. Boylman,
Dr. Turney.

NEW HAMPSHIRE.—David Kay.

UNITED STATES ARMY.—Charles S. Tripler.

The whole number of delegates in attendance was 301, exclusive of members by invitation.

Adjourned till Thursday morning.

THIRD DAY.

The president called the association to order at nine o'clock, and the reading of the minutes of yesterday was dispensed with.

The first business in order was an amendment to the constitution, laid over from last year, and proposed by Dr. T. L. Mason, of New York, to insert in the first line of the second paragraph of article 2, after the words "shall receive the appointments from," the words "any medical society permanently organized in accordance with the laws regulating the practice of physic and surgery in the State in which they are situated, and consisting of physicians and surgeons regularly authorized to practice their profession." Also to add to the sixth paragraph of the same article, the words "but each permanent member of the first class designated in this plan of organization shall be entitled to a seat in the association on his presenting to this body a certificate of

his good standing, signed by the secretary of the society to which he may belong at the time of each annual meeting of this body."

Dr. Linden A. Smith, of New Jersey, said amendments to the constitution should be adopted with care, and, though, perhaps, that now proposed might be desirable, still as Dr. Mason, who had proposed it was not present to explain his views, he moved that the subject be laid over until next year. This suggestion was adopted.

Another constitutional amendment, proposed by Dr. Henry Hartshorne, of Penn., and laid over from last year under the rules, provides to add to the 2d article, the words "no one expelled from this association shall at any time thereafter be received as a delegate or member, unless by a three-fourths vote of the members present at the meeting to which he is sent, or at which he is proposed." This amendment was adopted.

Another amendment proposed by J. Berrien Lindsly, of Tenn., was called up, to omit in article 2 the words "medical colleges, hospitals, lunatic asylums, and other permanently organized medical institutions in good standing in the United States; and also to omit the words "the faculty of every regularly constituted medical college or chartered school of medicine shall have the privilege of sending two delegates. The professional staff of every chartered or municipal hospital containing an hundred inmates or more, shall have the privilege of sending two delegates, and every other permanently organized medical institution of good standing shall have the privilege of sending one delegate."

This was laid on the table until the next annual meeting.

An invitation was received from Mons. Groux, requesting the delegates to meet him at the hall of the University, at noon to-day, to witness experiments on his congenital fissure of the sternum, which was deferred until four o'clock this afternoon, as the association had previously accepted the hospitality of Mr. and Mrs. Robert J. Ward, at the former hour.

Dr. Singleton offered a series of resolutions from "Young Physic," deprecating the introduction of schisms, and reflecting on the harmony of the association; which, after a vigorous speech from Dr. McDowell, was unanimously laid on the table, with a request that it should not appear on the minutes. Dr. Davis regarded the evidences of harmony and good feeling exhibited here this year as greater and more cheering than on any previous occasion, and deprecated any insinuation that unkindly sentiments existed.

Dr. McDermott submitted the following resolutions:—

Whereas, A vast proportion of the disease and misery that afflicts our race is caused by the excessive use of intoxicating liquors, and whereas, in the opinion of this association the evils of intoxication can be most effectually remedied by the establishment of Inebriate Asylums, wherein the victims of intemperance may be subjected to such restraints and treatment as shall effect a thorough reformation of their habits; therefore,

Resolved, That this association recommend the establishment of Inebriate Asylums in the various States of the Union.

Resolved, That the State and County medical societies, and all members of the medical profession be requested to unite in diffusing among the people a better knowledge and appreciation of the beneficial purposes and important benefits that would be conferred upon society by the establishment of such Asylums throughout the various sections of the country.

This resolution was referred to the mover as a special committee, with a request that he would report thereon at the next meeting of the association.

Dr. Shattuck offered the following, which was adopted :—

Resolved, That the committee appointed in May, 1887, on criminal abortion, be requested to continue their labors, and especially, to take all measures necessary to carry into effect the resolutions reported by them on the first day of the meeting.

Dr. Yandell, from the committee on voluntary essays, made a further report that a communication had been received from Dr. Langer, of Iowa, on subcutaneous injections as remedials, which, on motion, the author read.

The essay was referred to the writer as a special committee, with the request that he would report further at the next annual meeting of the association and continue his investigations.

Invitations to visit the Insane Asylum, and the library and museum of the Transylvania University were received.

The president appointed as the committee of conference to meet the committee from the teacher's convention, the following gentlemen :—Dr. Blatchford, Troy, N. Y. ; Condie, Philadelphia, Pa. ; Bozeman, Montgomery, Ala. ; Brodie, Detroit, Mich. ; and Snead, Frankfort, Ky.

Dr. D. Meredith Reese, from the nominating committee made the following final report :—

Special committees continued.

On quarantine—Drs. D. D. Clark, Penn. ; Snow, R. I. ; Jewell, Penn. ; Fenner, La. ; and Houck, Md. On medical ethics—Drs. Schuck, Penn. ; Murphy, Ohio ; Linton, Mo. ; Powell, Ga. ; Eve, Tenn. On tracheotomy in membranous croup—Dr. A. V. Dougherty, N. J. On the effects of lithotomy, performed in childhood, upon the sexual organs in after life—Dr. White, Memphis, Tenn. On mercurial fumigation in syphilis—Dr. D. W. Yandell, Louisville, Ky. On the improvements in the science and art of surgery, made during the last half century—Dr. Joseph McDowell, St. Louis, Mo. On the cause and increase of crime and its mode of punishment—Dr. W. C. Snead, Frankfort, Ky. On the education of imbecile and idiotic children—Dr. H. P. Ayres, Fort Wayne, Ind. On the uses and abuses of the speculum uteri—Dr. C. H. Spillman, of Kentucky. On the topography of Vermont—Dr. Perkins, of Vermont. On the pons varolii, &c.—Dr. S. B. Richardson, of Kentucky, and Dr. Fishback, of Indiana. On the physical effects of the hydro-carbons—Dr. F. W. White, of Illinois. On the effect of the periodical operations for urinary calculi upon procreation of the male—By J. S. White, of Tennessee.

The paper from Dr. Ellis, of Massachusetts, on the subject—"does the microscope enable us to make a positive diagnosis of cancer, and what, if any are the sources of error?" Was referred to the special committee on the microscope, of which Dr. Dalton is chairman.

Honorary resolutions were passed to the memory of the following members of the association, deceased :—Dr. W. W. Bowling, of Alabama ; Dr. Thomas D. Mutter, of Pennsylvania ; Dr. P. C. Gaillard, of South Carolina ; Dr. Jabez G. Goble, of New Jersey ; Dr. John K. Mitchell, of Pennsylvania.

Dr. R. K. Smith, of Philadelphia, submitted the following :

Resolved, That the death of Dr. John K. Mitchell, one of the members of this Association, has been to this body a loss keenly felt by every man who knew him. His eminence as a teacher, his varied acquirements in every department of learning, and his generous social qualities in every relation, endeared him to every member of the profession who had the pleasure of his personal acquaintance.

Resolved, That the family be notified of the action of this Association.

Other more formal resolutions were offered and feeling eulogies pronounced.

Dr. Sayre offered the following, which were adopted by acclamation:—

Resolved, That the thanks of the American Medical Association are eminently due, and are hereby presented to the citizens of Louisville, Ky., for the princely hospitality publicly and privately extended to the members of this body during its present session.

Resolved, That to the committee of arrangements and the profession of Louisville generally, our thanks are due for their kind and assiduous attention to the Association, and for the hearty welcome with which they have greeted our convention in their flourishing city.

On motion of Dr. Davis, the association adjourned, to meet at New Haven, on the first Tuesday in June, 1860.

The registration book during the day announced the names of Drs. D. G. Thomas, of New York; William S. Cain, of Kentucky; and Peter Allen, R. K. McMeans, and W. R. Kable, of Ohio—making three hundred and five members in attendance during the session of the association.

Editorial

TWELFTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.—We give this month a large amount of space to the proceedings of this association, to the exclusion of other matter. To abridge its proceedings more than we have done was quite impossible, and give to our readers anything like a correct history of its proceedings.

It convened at Louisville, Kentucky, on the 8d of last month; the attendance was quite large; the proceedings are very interesting, and its deliberations appear to have been conducted with good feeling and harmony.

Kentucky was honored with the selection of the president for the ensuing year.—Dr. Henry Miller, a gentleman whose character, experience, and high social standing eminently qualify him for the position; who entertained the members of the association at his residence, on the evening of the 4th.

A small number of reports were presented to the association, most of the committees being unprepared, and asked for a continuance until another year.

The next annual meeting will be held at New Haven, Conn., on the first Tuesday of June 1860.

CONVENTION OF MEDICAL TEACHERS.—This convention, called under a resolution adopted at the last annual meeting of the American Medical Association, met at Louisville, on Monday, May 2d, and were organised by the choice of Prof. Dixie Crosby, of Dartmouth College, as chairman, and Prof. George C. Blackman, of Ohio medical college, at Cincinnati, as secretary. Some thirty

delegates were present, including one (Prof. Shattuck) from Harvard University.

A series of resolutions was offered, stating the objects of the convention, which we will publish next month.

BERKSHIRE MEDICAL COLLEGE.—The annual course of lectures will commence on the 4th of August, (the first Thursday,) and continue sixteen weeks. For particulars see announcement.

MEDICAL CONVENTION FOR REVISING THE PHARMACOPOEIA OF THE UNITED STATES.—The medical convention for revising the pharmacopœia, which met at Washington in May, 1850, provided for assembling a convention for the purpose, in the year 1860, by the following resolutions:—

"1. The president of the convention shall, on the first day of May, 1859, issue a notice, requesting the several incorporated State medical societies, the incorporated State medical colleges, the incorporated colleges of physicians and surgeons, and the incorporated colleges of pharmacy, throughout the United States, to elect a number of delegates, not exceeding three, to attend a general convention to be held at Washington, on the first Wednesday in May, 1860.

"2. The several incorporated bodies, thus addressed, shall also be requested by the president to submit the pharmacopœia to a careful revision, and to transmit the result of their labors, through their delegates, or through any other channel, to the next convention.

"3. The several medical and pharmaceutical bodies shall be further requested to transmit to the president of the convention, the names and residences of their respective delegates, as soon as they shall have been appointed, a list of whom shall be published, under his authority, for the information of the medical public, in the newspapers and medical journals, in the month of March, 1860."

In accordance with the above resolutions, the undersigned hereby requests the several bodies mentioned to appoint delegates, not exceeding three in number, to represent them in a convention, for revising the pharmacopœia of the United States, to meet at Washington on the first Wednesday in May, 1860; and would also call the attention of these bodies to the second and third resolutions, and request compliance with the suggestions therein contained.

Geo. B. Wood, *Pres. of the Convention of 1850.*

Philadelphia, May 1st, 1859.

Physicians wishing a location are referred to the advertisement of Dr. J. N. Moore.

Correspondents will oblige by writing plainly their names, town, county and state. We have in several instances, been unable to answer letters because these are omitted.

BOOK OF FORMULÆ.—Eight pages of this work will be appended to each number of the Journal hereafter.

Subscribers will please notify us if they do not receive the Journal regularly.

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This valuable and popular medicine, prepared in conformity with the analysis of the water of the celebrated seltzer spring in Germany, in a most convenient and portable form, has universally received the most favorable recommendations of the medical profession and a discerning public, as the most efficient and agreeable Saline Aperient in use, and as being entitled to special preference over the many mineral spring waters, seidlitz powders, and other similar articles, both from its compactness and greater efficacy. It may be used with the best effect in all Bilious and Febrile diseases, sick Headache, Loss of Appetite, Indigestion, and all similar complaints, peculiarly incident to the spring and summer seasons.

It is particularly adapted to the wants of travelers, by sea and land, residents in hot climates, persons of sedentary habits, invalids and convalescents, captains of vessels and planters will find it a valuable addition to their medicine chests. With those who have used it, it has high favor, and is deemed indispensable.

In a torpid state of the liver it renders great service in restoring healthy action. *In good and rheumatism* it gives the best satisfaction, allaying all inflammatory symptoms, and in many cases effectually curing those afflicted. *Its success in cases of gravel, indigestion, heartburn, and costiveness* proves it to be a medicine of the greatest utility. *Acidity of the stomach, and the distressing sickness so usual during pregnancy* yields speedily and with marked success under its healthful influence. *It affords the greatest relief to those afflicted with, or subject to the Piles,* acting gently on the bowels, neutralizing all irritating secretions, and thereby removing all inflammatory tendencies. In fact, it is invaluable in all cases where a gentle aperient or purgative is required.

It is in the form of a powder, carefully put up in bottles, to keep in any climate, and merely requires water poured upon it to produce a delightful effervescent beverage.

Taken in the morning, it never interferes with the avocations of the day, acting gently on the system, restoring the digestive powers, exciting a healthy and vigorous tone of the stomach, and creating an elasticity of mind and flow of spirits which give zest to every enjoyment. It also enables the invalid to enjoy many luxuries with impunity, from which he must otherwise be debarred, and without which life is irksome and distressing.

Numerous testimonials from professional and other gentlemen of the highest standing throughout the country, and its steadily increasing popularity for a series of years, strongly guarantee its efficacy and valuable character, and commend it to the favorable notice of an intelligent public.

Prepared and sold wholesale and retail.

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Sanctioned by popular opinion and high authority of the most distinguished of the medical faculty. It offers to the afflicted a remedy, whose success has in every instance supported its deserved reputation. Being convenient and agreeable in its use, experience has proved that it retains in every climate its desirable and truly valuable character. It is in the form of a paste, is tasteless, and does not impair the digestion. It is prepared with the greatest possible care, upon well-tested

THE
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JULY, 1859.

[Series.

Remarks on *Rhus Glabra*, *Geranium Maculatum*, and
Hamamelis Virginica.

BY CHARLES A. LEE, M. D.

NUMBER VII.

IN investigating our indigenous botany we must guard against the danger of encumbering the materia medica with articles which possess no marked properties, or which have less efficacy than some already known, and whose efficacy has been already satisfactorily settled. But while guarding against this error, we are not to fall into the opposite one, of resting satisfied with what is already known and recorded in our standard authorities. While rejecting the doctrine of specifics, as generally understood, as both unphilosophical and opposed to all correct notions of sound pathology, and the *modus operandi* of remedies, we must, nevertheless, admit, that every remedy has specific properties; that is, properties which cause it to differ from all others, and to exert an influence peculiar to itself alone. It is true that many possess in common, very similar properties, and one may often, apparently, be substituted for another with equal advantage; yet their effects are not identically the same, though, perhaps, equally curative. A very superficial survey of the articles belonging to the class of emetics, cathartics, &c., will satisfy any one of the truth of this statement, yet, in regard to astringent substances it is not so obvious. Chemical analysis demonstrates that the proximate active

extractive constitutes the largest proportion, and is supposed to be the principal active ingredient. Dr. Barton, however, concluded that as the fresh leaves, when bruised and applied to the skin, caused redness, and even vesication, it must contain some volatile, acrid constituent. The researches of the late Dr. Mitchill, of New York, confirmed this opinion.

Your own recent analysis gives, in seven thousand parts:—

Organic matter, - - - - -	6488	
Inorganic " - - - - -	512	
	<hr/>	
	7000	
		PER CENT.
Gum and albumen, - - - - -	230.08	3.286
Sugar, - - - - -	181.28	2.589
Starch, - - - - -	83.92	0.484
Extractive - - - - -	849.92	4.998
Tannin, - - - - -	347.28	4.961
Particular principles, - - - - -	1002.68	14.295
Chlorophyle - - - - -	444.00	6.342
Soluble salts, - - - - -	82.88	1.184
Insoluble " - - - - -	429.12	6.130
Ligneous, &c. - - - - -	38.998	55.781
	<hr/>	<hr/>
	7000.00	100.000

There is a peculiar bitter principle contained in this plant as well as the other species, *C. maculata*, (*spotted winter-green*) to which the name *chimaphillin* may be given. It is included among the "particular principles" or "extractive," in the above analysis.

Therapeutical properties and uses.—From the large amount of *tannic acid* and *bitter principle* contained in the plant, we might infer that it was an efficient tonico-astringent. But, although it possesses these properties in no slight degree, it also has a decided action on the renal organs, increasing the urinary secretion and the depurating function. It has been suggested that this effect is in consequence of the peculiar active principle passing off, either changed or unchanged with the urine; but as this is the case with nearly all medicines which are administered, we must suppose that there is some specific power in the remedy by which it combines such apparently opposite virtues. It, however, possesses these properties in common with *buchu*, *uva ursi* and *pareira brava*;

all efficient tonics, and all exerting a specific influence over the genito-urinary organs.

This plant seems to have been extensively employed by the Indians in a variety of diseases before it was adopted by the medical profession. They employed it chiefly in the very cases in which it is used at the present day, viz., scrofula, dropsy, rheumatism, and affections of the kidneys and urinary passages. We have employed it to a considerable extent for many years, especially in the treatment of dropsical affections, in broken down constitutions and intemperate subjects, and generally with manifest advantage. It has tended to carry off the dropsical accumulations, while, at the same time, it imparted tone and vigor to the digestive system. Its alterative powers entitle it to a high place among our indigenous remedies, independent of its other therapeutical properties. In *albuminuria*, also, its effects have proved decidedly beneficial, and in some cases curative. In scrofula and cachectic affections generally, it will rarely disappoint the practitioner, especially when aided by chalybeates and a suitable regimen. Dr. Wood also states that in such affections he has found few remedies more efficacious. "Its mildly astringent and tonic properties," he remarks, "adapt it admirably to the treatment of the scrofulous cachexia, in which a general laxity of the tissues and debility of the functions call for these two remedial influences; while the chronic character of the affection requires that the medication should be gentle, in order that it may be long sustained without injury to the organs. In the earlier stages of the disease, I have been in the habit of directing, in connection with its use a saline laxative twice or three times a week, and in anemic cases, have had recourse also to the chalybeates, but in many instances the pipsissewa has been the remedy mainly relied on. It has seemed to me to exercise a favorable alterative influence in scrofula, independently of its astringency and tonic power; but it is extremely difficult to discriminate, in affections of this kind, between the course of nature and the effect of remedies, so that it is proper to speak of the latter with some reserve. Fully aware of the necessity of this caution, I am still of opinion, as the result of considerable experience, that pipsissewa deserves to rank next to cod-liver oil, and the preparations of iodine in the treatment of scrofula, and may often be usefully combined with one or both of these

remedies. In order that its full effects may be obtained, it should be long continued, with interruptions now and then, should any considerable degree of fever supervene. In cases attended with ulcers of an indolent or flabby character, it may be used with advantage in decoction as a wash, at the same time that it is administered internally." I have made this quotation in order to express my entire confidence in the opinions so strongly set forth. I have advised this remedy for a long time in the same class of cases, both in city and country practice, and with marked success. It is a tonic astringent of peculiar efficacy in the whole class of cachexia, but its effects are rendered more decided by an occasional dose of grey powder (*Hyd. cum. cret.*) and rhubarb, as an alterative. The compound decoction of aloes, with phosphate of iron, should be given in connection with it in chlorotic and anemic cases. During the revolutionary war, the pipsissewa was used extensively by the army surgeons as a tonic and diaphoretic in typhus fever. As a popular remedy in rheumatism it has also been in great repute. In Germany it has long been deemed one of the best remedies in abdominal and renal dropsies. The late Prof. Mitchill, of New York, made it the subject of his inaugural thesis, (*Phil.* 1803) in which he relates many cases of intermittent fever effectually cured by it. Dr. Barton extols it highly for its anti-lithic properties, and ranks it with uva ursi. It may, however, well be doubted, whether it has any specific powers of this kind, which entitle it to particular consideration.

On the whole it may be safely recommended as a diuretic tonic, in cases attended with loss of appetite and general debility, as it proves acceptable to the stomach, while it imparts tone to the whole digestive apparatus.

We have already referred to the influence of the fresh leaves when bruised and applied to the skin, causing redness and vesication, in consequence of some acrid volatile constituent in it.

Preparations.—Decoction, fluid extract, solid extract, pills, infusion, syrup, beer, &c.

The *decoction* is made by boiling one ounce of the dried plant in a pint and a half of water to a pint; the whole of which may be taken in the course of twenty-four hours. The *fluid extract*, prepared in vacuo, as kept in the shops, is perfectly reliable, and in all respects the most valuable form for administering. Dose—

One dram. The *solid extract* prepared in a similar manner, is also used in doses of ten to twenty grains, in form of pill of three grains each. The *infusion* may be extemporaneously prepared by adding one ounce fluid extract to one pint of water; the dose of which is two ounces. The *syrup* may be made by adding ℥ iv. of the fluid extract to ℥ xij. of syrup. Dose—℥ ss.; or if the fluid extract is not at hand, take ℥ iv. of the plant, ℥ xij. of sugar, and a sufficient quantity of water; macerate (finely bruised) in ℥ viij. of water, for thirty-six hours; then subject it to displacement, till one pint of fluid is obtained; reduce by evaporation to ℥ viij.; add the sugar, and form the syrup in the usual manner. The coriaceous character of the leaves renders long maceration necessary. One fluid ounce of this syrup represents two drams of the leaves. Dose—A tablespoonful. Pipsissewa beer is a very agreeable form for administering this remedy. R. *Chimaphila* ℥ vi. water one gallon. Boil, strain and add brown sugar one pound; powdered ginger ℥ ss.; yeast a sufficient quantity. Set it aside till fermentation has commenced; then bottle it for use. Dose—A small tumbler full three or four times a day. In the same way *cornus* and other indigenous articles may be made into beers.

CORNUS FLORIDA (*Dogwood*; *Boxwood*).—This important genus includes about twenty species, one half of which are natives of North America; all but two, which are herbaceous, are either trees or large shrubs. The above species, too well-known to need description, are found in nearly every part of the Union, especially in moist, swampy woods, flowering from February to June, indicating the time for the planting of Indian corn. The wood is hard, compact, susceptible of a high polish, and employed for a variety of purposes in the arts, where hardness and strength are required. The bark is officinal, though that of the root contains a greater amount of the active principle. The *C. florida* occupies a place in the primary, and the *C. coccinea* and *sericea* in the secondary list of the U. S. Pharmacopœia.

Physical properties and chemical composition.—The powdered bark of the root is of a reddish gray colour, very bitter to the taste, slight odour, and of an astringent and slightly aromatic taste. Its virtues are exhausted by water and alcohol combined. No very accurate analysis of this bark has been made previous to your own. Dr. Walther investigated it some years ago, but

very imperfectly; subsequently Mr. Cockburn found it to contain tannin, gallic acid, resin, a bitter extractive, and a crystalline substance. About the year 1830, Dr. Carpenter, a druggist of Philadelphia, claimed to have discovered an alkaline base in the *C. florida*, to which he gave the name of cornine, forming salts with acids. This substance is in the form of a grayish white powder, extremely bitter and deliquescent when exposed to the air. It was employed to a considerable extent by the late Dr. Morton, of Philadelphia, as an antiperiodic tonic in intermittents, and with much success.—(*Phil. Jour. Med. and Phys. Sci.* xi.) Owing, however, to the comparatively small amount of cornine contained in the bark of the *C. florida*, it has not been much employed; although, in the same dose it has been found equal to quinine in arresting intermittents. The recent analysis of the inner bark in your laboratory, yielded, in seven thousand parts:—

Inorganic matter,	-	-	-	-	-	-	876
Organic “	-	-	-	-	-	-	6124
							<hr/>
							7000
Gum and albumen,	-	-	-	-	-	-	104
A crystalline bitter principle,	-	-	-	-	-	-	12
Tannin	-	-	-	-	-	-	81
Coloring matter,	-	-	-	-	-	-	8
Particular principles (bitter)	-	-	-	-	-	-	238
Sugar,	-	-	-	-	-	-	4
Extractive matter,	-	-	-	-	-	-	232
Starch,	-	-	-	-	-	-	56
Resin,	-	-	-	-	-	-	209
Soluble salts,	-	-	-	-	-	-	94½
Insoluble “	-	-	-	-	-	-	781½
Lignin,	-	-	-	-	-	-	5180
							<hr/>
							7000

If the “peculiar crystalline bitter principle” represents the total amount of the cornine, then the latter only exists in the bark in the proportion of 1.3 per cent. If so, even if its extraction were much easier than it is, the quantity being so minute, its cost would be far greater than that of quinine.

Therapeutical properties and uses.—The physiological effects of the cornus bark are similar to those of the vegetable bitter tonics generally, viz., increased frequency of pulse, exalted temperature,

diaphoresis, sensation of fullness or pains in the head, and, if the quantity be sufficient, gastric derangement. Of these, the most strongly marked, are the increased temperature of the skin, and the general perspiration. Some experimenters have observed a constant tendency to sleep, which has continued for several hours. This, as occurs in many other cases, does not indicate any specific narcotic properties, but is the result of the cerebral fullness. Whether the remote effects are owing to sympathy, propagated from the gastric centre; or, are the direct effects of the introduction of the active principles into the blood, is not certainly known; although the latter is most probable, since the cold infusion or the alcoholic extract produces the same effects. But whatever doubt there may be in regard to its true mode of operation, it is very evident that the cornus has properties calculated to invigorate the vital forces, and the organic nervous energy without unduly stimulating the circulatory system. A person in good health may take the cornus, as well as any of the other vegetable tonics in moderate doses, and for a long time without any marked effect on any of the functions; but, taken in the same manner and the same quantities, in certain pathological states, as a general lowering of the vital force and nervous energy, independent of organic disease, or where miasmatic poison has caused a tendency to paroxysmal attacks, as fever and ague, the therapeutical influence of the cornus will be promptly manifested in a general invigoration of the vital forces, and suspension of the paroxysms. Here, as in regard to cinchona, we must rest satisfied with the result, for the manner in which it is brought about must ever remain a mystery. In certain morbid conditions, as hectic fever, or great debility, attended with frequency of the pulse and cold colliquative sweats, the cornus would seem to possess the powers of a *sedative*, as manifested in decided lowering of pulse and abatement of perspiration. This effect is common to all neurotic tonics, in certain pathological conditions of the body. It depends on their imparting increased tonicity to the muscular fibres of the heart through the organic nerves, thus enabling the central organ of circulation to throw out a greater quantity of blood at each contraction. The cardiac irritability also, is lessened by the temporary increase of tonic power, and vital contractility. We see this constantly illustrated in cases of great debility, by the

diminished frequency and increased force of the pulse, consequent on the administration of alcoholic stimulants. The tonic vegetable alkaloids and neutrals possess this power in a still greater degree. On the contrary; if cornus and other analogous substances be given in acute or sthenic conditions, marked by those phenomena which are characteristic of inflammatory action, the circulation will be correspondingly increased by an increase of inflammatory action; in both conditions, however, acting as a stimulant. It has been stated by some writers, that the cornus is apt to cause derangement of the digestive organs, and hence is, in many cases, inadmissible where other vegetable tonics would be unobjectionable. But this effect depends entirely on the mode of administration and the quantity given. The *hydro-alcoholic extract* is certainly not open to this objection.

The cornus florida is a tonic-astringent, occupying the first rank among our indigenous antiperiodics. Its effects are closely analogous to those of the cinchona bark, for which it may often be successfully substituted. Eberle states that thirty-five grains of the dogwood bark are equal to thirty of cinchona.—(*Thera.* vol. 1st, p. 304.) Our own experience with this article has satisfied us that most cases of our periodic or miasmatic fevers will yield to its judicious use. The severer forms may require the more energetic action of quinine, but as intermittents generally occur, no other antiperiodic will be required. Our rule is to administer from half a dram to one dram of the hydro-alcoholic extract between the paroxysms, preceding its use by a cholagogue cathartic. It is also well adapted to promote the appetite and digestion, in atonic and enfeebled conditions of the stomach, and as a general tonic in feebleness and debility of the whole system, especially of the muscles. It, also, has considerable anthelmintic power, though this may be dependent on its influence in improving the functions of the alimentary canal, and correcting those conditions of the digestive organs which favor the production of worms.

Preparations—These are the powder, fluid extract, solid extract, cornin, tincture, infusion, wine and syrup.

The powder is seldom used, it being apt to disturb the stomach. The fluid extract is wholly reliable and efficient, in doses of from thirty drops to two drams. It contains all the active principles, and is adapted to all cases where the article is indicated. As a

stomachic, half a dram before eating, will generally be sufficient. The *solid extract* as well as the fluid, is now prepared at our large establishments, in vacuo, and are, doubtless, superior to those prepared in the ordinary manner. Still, the country practitioner who has not these preparations on hand, can prepare them for himself so that they will prove sufficiently reliable. The following formula will serve as a guide:—Take of dogwood bark, coarsely powdered, one pound; absolute alcohol, four pints; water, six pints; macerate the bark with the alcohol for five days; pour off the tincture and express; boil the residuum for half an hour in three pints of the water; strain through linen while hot, and express; repeat the boiling for the same length of time with the remaining three pints of water; strain and express as before; then mix the decoctions, and evaporate to the consistence of a thin syrup; distil the alcohol from the tincture until it acquires the same thickness; then mix both inspissated liquors and evaporate to the consistence proper for working pills. Ten pounds of bark will, in this way, yield *fifteen ounces* of extract. Care must be taken to avoid burning the extract by evaporating towards the close, over a very slow fire; or, what would be still better, a sand-bath. Good cornus bark, such as from the root or the inner bark of the trunk, yields about *nine* per cent of extract, and one ounce of it is equal in antiperiodic power, it is believed, to half an ounce of quinine. At fifty cents per ounce, therefore, the extract would be twice as cheap as quinine, and it would undoubtedly be manufactured at a profit, at less than that price. In some parts of the southern States this preparation has nearly superseded the cinchona. The above extract is less bitter and more astringent than a similar preparation of the Peruvian bark. A more simple mode of making the extract, is to evaporate a tincture of the bark in a sand-bath; the tincture to be prepared by digesting it with proof spirits, in the proportion of two ounces of the former to a pint of the latter, allowing it to stand for one week before digesting; occasionally, during this time, submitting it for a few hours to a moderate heat, to favor the solution of its active constituents. This may be called a concentrated preparation of the cornus, as it contains the active principles, separated from the lignin and other insoluble matters.

This extract may be given in doses of from five to ten grains;

simple, or combined with other remedies, as blue mass, calomel, ipecac, &c. The *cornin* is a true alkaloid; first discovered by Dr. Carpenter, and employed by Dr. Morton; although it has since been questioned whether any such principle has ever been detected in the cornus bark. But it may readily be separated by the same processes which are employed in preparing sulphate of quinine, from the various species of cinchona bark. It probably exists in combination with tannic acid. *Cornin* is, however, not kept in the shops, and that which now goes under this name is nothing but a solid extract mixed with the crude powdered bark, chloride of soda and other impurities. The dose of the real *cornin* is from one to five grains.

The *tincture* of cornus is made extemporaneously by adding four ounces of the fluid extract to twelve ounces of proof spirits, the dose of which is from two to four drams. The *infusion* is readily prepared by adding two ounces of the fluid extract to one pint of water.—Dose, \mathfrak{z} ij. The *wine*, add \mathfrak{z} v. fluid extract to \mathfrak{z} x. sherry wine.—Dose, \mathfrak{z} j.— \mathfrak{z} iij. *Syrup*.—Fluid extract \mathfrak{z} iv. syrup one pint.—Dose— \mathfrak{z} ij.— \mathfrak{z} iij. *Decoction*.— \mathfrak{z} j. powdered bark to one pint. Where any of the above preparations seem to disagree with the stomach, it is probably from their having been made from the recent bark, or given in too large doses. A few drops of laudanum, however, will, in nearly all cases, obviate any such tendency. An infusion of the dried flowers is a very useful stomachic tonic, and well adapted to cases of flatulent colic. The above remarks apply also to the *cornus circinata* and *C. sericea*, as well as some other species.

The extract of the *C. circinata* is, however, more astringent than that of the *C. florida*. It is highly recommended by Prof. Ives, of New Haven, and the late A. W. Ives, M. D., of New York, in dysentery. The late Dr. Tully also extolled it in the same disease. One ounce of the bark of the *C. circinata* yields one hundred and fifty grains of solid extract by boiling. It is used externally in New England in cases of diarrhea, dyspepsia, &c.

A valuable Report to the Pharmaceutical Convention on Home Adulterations.

At the meeting of the Pharmaceutical Association, Mr. Carney, from the committee upon the subject of home adulterations, appointed at the annual meeting of the association, held in Washington last year, made the following report, which is of so general public interest that we give it entire:—

The subject placed in their hands has received, as it deserves, careful consideration.

The co-operation of our pharmaceutical brethren from all parts of our country has been solicited, and your committee take pleasure in stating that the interest shown by our members in this subject proves that it is a matter worthy of all the time and care bestowed upon it from year to year, by this association.

The matter of adulteration is one that appeals to every person strongly. Viewed in the best light we can place it, that of a mere matter of dollars and cents, it even then meets with the condemnation of those who are only conscious of the wickedness of the practice by being touched in their most sensitive region—the pocket.

For, although some do say that mixing rice flour with cream of tartar, and chickory with coffee, is a “*harmless*” sophistication; still, when they are obliged to pay the price of “Best Old Mocha,” for chickory, and forty cents a pound for rice flour, *then* the enormity of the offence is at once apparent.

Before presenting to the association such specimens of adulterations and sophistications as your committee have to offer, it will be well, perhaps, to give an explanation as to what constitutes an adulteration. For the best definition of an adulteration, we are indebted to Dr. Hassall, of London. He says:—“The sale of one article in place of another is not an adulteration, but a substitution. The presence of substances in articles, in consequence of impurities contained in the materials out of which they were prepared, as for example, arsenic in the hydrochloric acid used in the preparation of unfermented bread, does not constitute *adulteration*, they are simply impurities. Lastly, the *accidental* presence of substances in any commodity does not constitute an adulteration. Excluding, then, from the class of adulterations all cases of substitution, impurities and accidental contaminations, adulteration may thus be defined:—It consists in the intentional addition to an article, for the purpose of gain or deception, of any substance or substances the presence of which is not acknowledged in the name under which the article is sold.”

Your committee feel that, perhaps, they may bring forward some facts, not in all cases agreeable, and that they may be met with the oft repeated statement that “the public wish the adulterated articles,” that “pure mustard and cream tartar will not sell,” coffee with burnt peas and apples in it is “richer” and more “nutritious,” but we feel constrained to say this pretended regard for the wishes and tastes of the “public” is most generally based upon a slight interest for the pecuniary welfare of the manufacturer or trader.

The public do *not* wish adulterated articles; were they once aware of the

real difference between pure and impure articles they would not hesitate a moment in their choice: could they but see the peas and beans roasted for best "old Mocha," the sulphate of soda for "cream tartar," the turmeric for "mustard," the alum for bread, and the sulphuric acid for "vinegar," your committee feel that very soon the lucrative portion of the adulterator's business would pass away, leaving him with a reputation far from enviable.

It is not only in articles of food, but in medicines also, that this practice prevails, and your committee have felt that upon this part of the subject they should bestow a large portion of their investigations.

Science is never so noble as when engaged in advancing those arts which promote health or mitigate the sufferings of humanity, but when it is prostituted to ignoble purposes, and in direct opposition to the relieving of suffering, is engaged in sophisticating with a cunning and well concealed hand those very articles which the physician relies upon for promoting and restoring health, then indeed is it deserving of condemnation.

Very many of the adulterations of the present day exhibit a knowledge of science worthy a better cause; many of them are decidedly pernicious, and serious results have followed their use; of such we may instance the employment of poisonous pigments for the colored confections, lead in snuff, and in cayenne pepper, copper in pickles, and *coccus indicus* and *nux vomica* in beer and ale.

Your committee would refer to any of the works published in France or England devoted to the exposure of the frauds in food and medicine, for evidence, were it needed, of the great interest felt in this subject by scientific men; and they cannot better illustrate the necessity of these investigations than by giving a short list of those articles of food which have been proved to be adulterated, and the substances used for the purpose. Many of these have been met with by your committee, and some of them are described by Dr. Hassall, in his work on "The Adulterations of Food and Medicine."

The articles we specially refer to are as follows:—

Colored confectionery—Adulterated with emerald or Scheele's green, arsenite of copper.

Beer—with *coccus indicus* and *nux vomica*.

Pickles and bottled fruits—with verdigris and sulphate of copper.

Custard Powders—with chromate of lead.

Tea and snuff—with the same,

Cayenne and curry powder—with red oxide of lead.

Sugar confectionery—with gamboge, orpiment, or sulphuret of arsenic, and chloride of copper.

Flour and bread—with hydrated sulphate of lime, plaster of Paris and alum.

Vinegar—with sulphuric acid.

Sugar—with sand and plaster of Paris.

Milk—with chalk, sheep's brains and ground turmeric.

Arrow root—with ground rice.

Chocolate—with rice, flour, potato starch, gum tragacanth, cinnabar, bals.

Peru, red oxide mercury, red lead, carbonate of lime, and the red ochres to bring up the color.

Mustard—with ground turmeric, to give it a brilliant color.

Butter—with potato starch, mutton tallow, carbonate of lead, and sugar of lead.

That it would be right to make public the persons who are directly engaged in the practice of adulteration, we feel that few would deny; but your committee refrain from pursuing this course at present, suggesting, however, to the association the propriety of taking some measures for exposing those who make it a regular matter of business.

It is, perhaps, our *duty* to be more explicit in this matter as to what parties are guilty of the adulteration, but your committee know that all classes of trade, manufacturer, jobber and retailer, are sometimes implicated in these frauds.

Certain kinds of adulterations and sophistications are practised upon so large a scale as to be beyond the small dealer; they involve the use of extensive machinery, which the ordinary tradesman does not possess.

It was once the practice for druggists to systematically add to all drugs certain amounts of saw-dust, oat-meal, and other substances of less value than the article in its purity, to make good the loss by drying and powdering. The average loss was considered to be about four per cent., and as this amount was added to compensate, it was known as the "four per cent. system." The practice, under this name, was principally confined to England, but from specimens with which your committee have, from time to time, met, it is apparent that a practice somewhat similar exists occasionally on this side of the water.

Your committee feel also that the tradesman is sometimes a party to the fraud, although he may not be the actual mixer. He often purchases of the wholesale dealer an article which he knows cannot be pure, from the price asked; he is willing, however, to stretch his elastic conscience round the apparent discrepancy, and, as one of the members of your committee has been told by a retail apothecary, *if* the jobber told him an article *was* pure, although *he* knew it was not, he should consider the jobber as having taken the responsibility, and should buy and sell the article with a clear conscience.

Your committee do not appreciate this kind of a conscience, and trust that our profession is not graced with many such. It is our duty as pharmacutists to do all in our power to put an end to this pernicious system of adulteration, using our influence against a practice which, in the language of another "is undermining the very foundation of trade, namely, *faith in commercial integrity*."

In England the matter of pecuniary loss to the government has been taken into consideration, and from careful estimates the revenue suffers by adulteration to the extent of two millions annually! The author of "Food of London" states that half the national revenue is derived from articles of consumption. "If the government loses so much, the public suffers a much greater loss."

This subject of home adulterations then is one worthy of attention by State and public officers, even as a question of pecuniary moment only.

As a matter relating to public health this subject is worthy careful attention; very many of the adulterations practised upon food and medicine are said to be "harmless in themselves;" but we have seen that in a pecuniary point of view at least, they are not so. Very many instances are on record, however, where not only serious, but fatal results to health have followed the use of adulterated articles.

During the past year your committee have met with very many instances of fraud and deception in drugs; some of these are very curious, and are worthy of a place in a Report of this kind.

During the past year, in a wood turner's shop in Boston, was seen more than a barrel of East India rhubarb, which was being turned down into "true Turkey."

This rhubarb was sold for genuine and real Turkey rhubarb.

A druggist was applied to by a man for a situation as porter in his store:—

"What can you do? What have you been doing at your last place?" were the questions asked.

"Oh!" replied the man, "I have done everything about the store that was needed; until the past year, I have worked up stairs in *the room* making Turkey rhubarb."

"Making Turkey rhubarb! what do you mean by that?"

"Why," replied the man, "we used to take the East India and *file* it and *bore* it into true Turkey."

The man was not engaged.

Both of these, it may be remarked, are merely instances grateful to those who urge that "*most* of the adulterations are *harmless*," but they must appeal with considerable force to those who are sensitive as to the mere value of an article in dollars and cents, for East India rhubarb at 90c. per lb. transformed into "true Turkey" at \$1.50 per lb., is certainly a touching instance of the mutability of earthly things, especially drugs.

There is one more aspect in which this subject of adulterations is to be considered, and that is the moral bearings of the practice. It is not possible for an adulterator to be a strictly honest man. The practice not only makes those guilty of it dishonest, but it also causes distrust on the part of those who buy; confidence in the integrity of the seller is lost by those who purchase, and not only do the guilty, but the honest traders suffer; in fact the standard of morality and business integrity is lowered, and the innocent suffer with the guilty.

The truly upright man who cannot conscientiously adopt the practices of his competitors, how fares it with him?

He struggles along, selling pure articles at a smaller profit than those who are less scrupulous; he is discouraged, and well he may be oftentimes; and were it not for the proud consciousness of right doing, he would become disheartened, less honest, and finally adopt the practices he formerly condemned.

The practice of adulteration then is one deserving condemnation, because prejudicial to public health, honesty and morality, and in a pecuniary view,

as occasioning a loss to the public and the government.

If we admit the truth of the statement of Dr. Normandy, and very few will question it, we can see to how great an extent the practice has advanced. He says:—"Adulteration is a wide spread evil, which has invaded every branch of commerce. *Every thing* which can be mixed or adulterated, or debased in any way is debased."

Your committee submit herewith a brief list of drugs found to be adulterated, and the articles used for the purpose.

Many of the substances referred to in this list are taken from "Chevalier's Dictionary of Alterations and Falsifications."

Acetate of morphia is adulterated with acetate and phosphate of lime.

Benzoic acid with asbestos, carbonate and sulphate of lime, hipponic acid and sugar.

Citric acid with oxalic and tartaric acids, and sulphate of lime. It often contains sulphuric acid and salts of lead or copper. In 1850, M. Pennes discovered the presence of lead in this acid, obtained of three highly respectable dealers. The acid was very white, and was intended to prepare the purgative lemonade.

Tartaric acid with cream of tartar, acid sulphate of potassa, and with lime.

Aloes with colophony, ochre, extract of liquorice, gum arabic, and calcined bones.

Starch with carbonate and sulphate of lime or alabaster; the more common fraud is, however, to saturate it with moisture.

Arrow root with potato starch and rice flour.

Assafœtida with gum resins of poorer quality, sand, and other inert substances.

Balsam copaiba with the resinous extract by decoction of the bark and branches of *copaifera*, turpentine, colophony, and fat oils.

Balsam Peru with colophony, turpentine, benzoin resin, alcohol and fixed oils.

Balsam Tolu with turpentine, colophony and other resins.

Chloroform with chlorohydric ether, hypochlorous acid, hydro carbonated oils, compounds of methyle and aldehyde, and fixed substances.

Beeswax with resin, burgundy, pitch, earthy matter, flowers of sulphur, starch and amylaceous substances, tallow, stearic acid, yellow ochre, calcined bones, and sawdust.

Tart. emetic with cream tartar, oxide antimony, tartrate of iron, chlor. calcium and potassium, and sometimes is contaminated with salts of copper and tin.

Essential oils with alcohol and fixed oils.

Iodide potassium with chloride potassium and sodium, and calcium, carbonate of potassa and *bromide* of potassium. The latter salt being sometimes in so large a proportion, owing to its lesser price, as to *replace*, almost entirely, the iodide.

Manna with glucose or starch sugar, and starch. The large flake manna is sometimes made from a mixture, consisting of a little manna, flour, honey, and a purgative powder; these are boiled together to a syrupy consistence, and

then moulded in form of "flakes;" common "sorts manna" has been converted into "flake" by being boiled in water, clarified with charcoal, and moulded into proper form.

It is possible to extend this list, but your committee feel that enough has been already brought forward to establish the fact, were proof necessary, that very many articles depended upon as medicines to restore health, may be, *because adulterated*, highly pernicious and even fatal in their effects.

Your committee propose to offer, in concluding this report, already perhaps extended beyond its limits, a few specimens of adulterations, and substitutions which have come to their knowledge the past year, and to give the simpler tests by which they may be detected.

First we ask your attention to the

SUBSTITUTIONS.

Specimen No. 1, is western alcohol. A barrel of this was sold for "Atwood's alcohol." A very simple examination proves it to be loaded with grain oils, and thus exposes the fraud at once. The simplest way to detect the grain oils is to treat the suspected sample with an equal volume of concentrated sulphuric acid; if grain oils are present, the mixture becomes darker colored, owing to their carbonization. Also they may be detected by a solution of nitrate silver; expose the alcohol, to which this solution has been added, to the action of sunlight, or diffuse daylight, if grain oils are present, a black precipitate subsides after some little time. This change does not occur if the alcohol is pure.

Specimen No. 2, is an oil, principally linseed, which was sold for true English oil of sweet almonds." The physical characteristics and the temperature required for congelation serve to detect this fraud. Linseed oil remains fluid at zero, while true oil almonds congeals above that temperature.

Specimen No. 3, is false oil, of bitter almonds. This was purchased with the label of a well known English house upon it, and was sold as "true essential oil of bitter almonds." It is the article known as "essence de Mirban," or nitro-benzole, and may be detected very easily-

When a mixture of one volume, *true* essential oil almonds, two volumes of alcohol, and one volume of very weak solution of potassa, mixed well together, is allowed to stand, it is converted into benzoic acid in from twenty-four to forty-eight hours.

The fictitious oil (nitro benzole) is not capable of undergoing this change.

Specimen No. 4, is fictitious tapioca. This article purports to be the fecula of *iatropha manihot*, or *cassiva*. It is not, however, what it appears, and is proved to be, by microscopical examination, entirely a fictitious article; made from potato starch, and does not contain one particle of real tapioca.

This article is made in Liverpool, England, and imported into New York.

Your committee cannot refrain from recommending the use of the microscope as being a very valuable aid to the pharmacist. By this instrument he is enabled to detect at once, frauds which perhaps might be previously unsuspected, particularly articles of food, as in the instance just brought to your notice.

Specimen No. 5, is Melambo or Matias bark.—This bark is largely used for grinding with all kinds of spices. For further description we refer to Prof. Procter's *Journal of Pharmacy*, vol. 29th, pp. 103 and 215, where the nature and characteristics of this bark are very fully set forth by Messrs. Edward Parrish and Frank B. Daucy. Your committee are not aware of other uses, to any extent, to which this bark is put, *except for adulterating spices. Specific adulterations*, which concludes the report, will be given in the next No.

Therapeutical Action of Solanine and Dulcamara.

Prof. Caylus, of Leipzig, has undertaken a series of experiments to ascertain the exact effect of dulcamara, and its active principle, solanine. These substances belong to the class of narcotico-acids, as they produce a paralyzing action on the medulla oblongata, and an exciting action on the nerves. They cause death by producing paralysis of the respiratory muscular apparatus, by an action analogous to that of concine and nicotine. They possess a therapeutical action in spasms and irritable conditions of the respiratory organs, in simple spasmodic cough, whooping cough, and spasmodic asthma. Their therapeutical action in certain morbid conditions of the blood—as gout, rheumatism, constitutional syphilis, and perhaps in certain chronic diseases of the skin—may be due to their augmenting the excretion by the kidneys, of the constituent parts of the blood which have undergone combustion, and not to the excitement of cutaneous activity. Solanine and dulcamara may be given without danger in inflammatory conditions of the stomach and the intestinal tube, as they exercise no action on those organs. Inflammation of the respiratory organs presents no contra-indication to the employment of solanine and dulcamara, but they are contra-indicated in inflammation of the kidneys. The medium dose of solanine for an adult is from one to five centigrammes of acetate of solanine, a substance which M. Caylus prefers to the pure alkaloid, in consequence of its solubility. The most suitable form of administration is in pills, the solutions of the salts of solanine having a very disagreeable taste. The extract obtained from alcohol, and then washed with water to remove the alcohol, is preferable to the watery extract generally employed.—*Presse Médicale Belge*, Sept., 1858.

Diuretic Action of Iodide of Potassium.

By C. Handfield Jones, M. D., F. R. S.

It appears reasonable to expect that the healing influence of a drug in certain morbid states may be shown to be explicable by its general mode of action, yet there are certain remedies which exert a very positive curative power, and yet afford no clue in their general mode of action to explain their special effects. Such a remedy, according to Dr. H. Jones, is iodide of potassium, which has certainly a strong controlling power over periosteal inflammations,

whether syphilitic or rheumatic, as well as over rupial ulcers, which generally heal under its use. It is also more or less useful in inflammations affecting fibrous tissues in various parts. Dr. Jones has made a series of experiments upon the effects of iodide of potassium administered to patients, and has examined the urine in each case; and the general results are thus summed up:—

1. That the quantity of water was greatly increased in three out of six cases; a little (one-sixth) increased in one; diminished in two.
2. Out of five cases, the acidity was increased in three, diminished in two.
3. Urea was increased in three, diminished in three.
4. Phosphoric acid was increased in four, diminished in two.
5. Sulphuric acid was increased in four, diminished in two.
6. Chlorine was increased in three, diminished in two out of five cases; in two the increase was very considerable.
7. Uric acid was diminished in four out of six cases, greatly increased in the remaining two.

The most marked effects seem to be the increase of the water, of the phosphoric and sulphuric acids, and of the chlorine. But Dr. Jones adds, that as far as these confessedly empirical results go, there seems to be no help or clue afforded to trace out any connection between the empirical facts just noticed. A varying diuretic effect does not give any explanation of the *modus operandi* of the drug in curing a node or an ulcer. For the present Dr. Jones concludes that we cannot attain to more than an empirical acquaintance with the operation of iodide of potassium.—*Beale's Archives of Medicine*, No. 3.

Alum and Savin in Condylomata.

In those raised patches of skin, known as mucas tubercles, or condylomata, existing about the verge of the anus and around the genitals, but especially those which are wide-spread and flat, more extensive than prominent, Mr. Coulson, at St. Mary's hospital, has been remarkably successful in producing the diminution of the swelling and causing them to dry up, by the application to a powder consisting of equal parts of alum and savin. This is quite painless, and a cure is generally completed in a few days.—*London Lancet*.

Therapeutical Action of the Acid Nitrate of Silver.

By Dr. Crocq.

Under the name of acid nitrate of silver, Dr. Crocq designates a solution of nitrate of silver in nitric acid. He thinks this preparation especially useful when it is desirable to modify certain surfaces more or less deeply without producing a deep destruction of the tissues; in such cases, in fact, as are usually treated by the solid nitrate of silver or by the acid nitrate of mercury. The acid nitrate of silver is preferable to the former, because it penetrates much better into all the sinuosities and anfractuositities of surfaces, and because its action can be rendered either superficial or deep. It is preferable to the second, because it does not act as a poison by absorption, however large may be the surface cauterized, while the acid nitrate of mercury may and does

produce symptoms of mercurial poisoning. Moreover the action of the acid nitrate of silver may be immediately arrested, when it is applied to organs where its extension might become prejudicial, as on the eye, the vagina, and in the throat, for in these cases the injection of a solution of chloride of sodium renders it instantly inert. The acid nitrate of silver may be employed advantageously in cases of chancre, in simple and gangrenous ulcers, in some wounds, in lupus, in epithelial tumors, and cancrroid ulcers; in ulcerations of the neck of the uretus, and granular affections of the cervix uteri and of the conjunctiva.—*Bulletin General Therapeutique*, Feb. 15th, 1859.

American Pharmaceutical Convention.

EIGHTH ANNUAL MEETING.

The American Pharmaceutical Association commenced its eighth annual session, at the rooms of the Massachusetts college of pharmacy, in Temple Place, on September 13th. This association embraces the Massachusetts, New York, Philadelphia, Maryland and Cincinnati colleges of pharmacy, and the pharmaceutical associations of St. Louis and Washington. The meeting last year was held at the Smithsonian Institute, Washington.

The association has nearly three hundred members, embracing many of the leading apothecaries in the principal cities and towns of the Union. The object of the association is to improve and regulate the drug market—prevent the adulteration of drugs—establish friendly relations between druggists, etc. Any respectable druggist may become a member, by election, and the payment of a yearly contribution of \$2.

The meeting was called to order by Robert Battey, of Rome, Ga., one of the vice presidents, in the absence of the president.

On motion, Alfred B. Taylor, of Philadelphia, was appointed temporary secretary.

The Chair appointed Messrs. John Meakim, of New York, James S. Melvin, of Boston, and Israel J. Grahame, of Baltimore, a committee on credentials.

S. S. Garrigues, of Philadelphia, presented the following names of members elected by the executive committee during the recess:—

M. S. McConville, Worcester, Mass.; Raymond Graverend, New York city; L. Terry, New York city; Henry Steele, New York city; Wm. Wright, Jr., New York city; James H. Anderson, New York city; H. Wandoner Bedford, New York city; Alfred J. Shipley, New York city; James T. King, Middletown, N. Y.; J. Hartley Bunn, Lynchburg, Va.; R. H. Lane, Newberry, C. H., S. C.; J. F. Gross Klaus, Navarre, Ohio; O. F. Gove Collins, Beloit, Wis.; Louis D. Lanozweert, San Francisco, Cal.; Charles Hodge, San Francisco, Cal.; George S. Dickey, San Francisco, Cal.; George E. Hinckley, San Francisco, Cal.; Albert J. Calder, Providence, R. I.

Mr. Samuel M. Colcord, of Boston, moved that a reporter be employed to assist the recording secretary, and the motion was adopted. The committee of arrangements were authorized to secure the services of a reporter in accordance with the above vote.

Mr. Colcord also announced that Mr. Kimball, of the Boston Museum, had furnished a package of tickets to that place of amusement, for the use of members of the convention. The invitation of Mr. Kimball was accepted, and a vote of thanks adopted.

The committee on credentials reported the names of gentlemen duly accredited to the convention:—

From the Massachusetts College of Pharmacy.—Thos. Resticaux, William Brown, George W. Parmenter, Charles H. Price, Eben Blatchford.

New York College of Pharmacy.—H. T. Kiersted, Isaac Coddington, Wm. Hegeman, George W. Berrian, Geo. Thurber.

Philadelphia College of Pharmacy.—Dr. W. H. Pile, D. S. Jones, Chas. Ellis, Samuel S. Bunting, Charles Bullock.

Maryland College of Pharmacy.—James Balmer, Joseph Roberts, N. H. Jennings, A. P. Sharpe, I. J. Grahame.

Cincinnati College of Pharmacy.—Wm. S. Merrill, E. S. Wayne, W. J. M. Gordon, John C. Parr, William B. Horner.

Washington Pharmaceutical Convention.—Joseph W. Nairn, Jas. N. Callan, Samuel B. Waite, Joseph B. Moore, John Schwartz.

St. Louis Pharmaceutical Convention.—Eno Sander, William H. Dornin, James O'Gallagher, S. D. Handel, William B. Parker.

None of the delegates from Cincinnati or St. Louis were present.

The committee read a letter stating the reasons why the delegates elected for St. Louis were not present.

A letter was also read from Mr. John L. Kidwell, of Georgetown, D. C., the president of the association, regretting his inability to be present.

It was moved that the names of delegates elected by the St. Louis pharmaceutical society be included in the list of delegates of this convention, and the motion was adopted, and their names appear in the list above.

A letter was read by Mr. Colcord, of Boston, from Eugene L. Massot, president of the St. Louis association, tendering a cordial invitation to the American association to hold their next annual meeting in that city.

A letter was read from Wm. J. M. Gordon, of Cincinnati, a delegate, giving the reasons for his absence from the convention.

Wm. A. Brewer, of Boston, read communications from the Massachusetts Historical Society, from John P. Bigelow, in behalf of the trustees of the city library, and from N. B. Shurtleff, for the trustees of the State library, inviting the members of the association to visit their respective rooms. The invitations were accepted, and a vote of thanks unanimously adopted.

The executive committee reported the following names of persons suitable to be elected members of the association:—

A. H. Wilson, Philadel.	M. M. DeLevis, Chicago.	J. B. W. Nowlin M. D.,	F. J. Green, Millidgev'e,
T. A. Lancaster, "	C. Pefferman, Peru, Ind.	Rome, Ga.	Ga.
A. F. Neynaber, "	W. J. Luck, Vincennes.	W. H. Warner, "	C. C. Bixby, N. Bridgew'r
I. T. Sillyman, Col. S. C.	W. F. Clency, Cincinnati.	B. M. Smith, Atlanta, Ga.	O. Tompkins, Boston.
J. H. Zetten, Macon, Ga.	J. J. Cook, Lewiston, Me.	R. J. Massey, M.D., "	Warren Tapley, Lynn.
W. S. Potts, St. Paul.	E. T. Miller, York, Pa.	J. A. Taylor, "	A. H. Ramsey, Cambridg'e
Henry C. Morris, "	J. T. Barnett, Danville Ky	W. A. Lansdell, "	I. T. Campbell, S. Boston
W. Neergaard, N. York.	J. Stratton, B'dent'n, N. J.	D. F. White, Charlestown	Thomas Dolber, Boston.
John W. Shedden, "	H. Q. Mack, N. Y. city.	Mass.	Charles Clarke, "

J. T. Brown, Boston.	E. A. Morse, Rutland, Vt.	rence, Mass.	port, Mass.
G. M. Washburn, Ill.	F. O. Bigelow, Medford, Mass.	C. L. Chase, Brandon, Vt.	T. S. Harris, Boston.
(with E. G. L. Faxon.)		N. R. Scott, Worcester, Mass.	G. H. Chapman, Boston.
T. A. Sweetser, S. Dan's.	J. L. Burbank, Worcester's Mass.	N. S. Harlow, Bangor Me.	B. K. Biles, Springfield, Mass.
J. F. Rollins, Concord, N. H.	J. H. Thatcher, Portsmouth, N. H.	L. G. Dodge, Boston, Ms.	N. Dickerman, Jr., Waterbury, Conn.
Julius Cene, "	L. Babo, Boston, Mass.	F. K. Phillips, K. Boston.	J. French, Boston, Mass.
P. Dutcher, St. Albans, Vt.	J. G. Steele, San Francisco.	A. G. Weeks, "	J. Morgan, Concord N.H.
J. B. Arnold, Fitchburg.	C. E. Hinckley, "	Wm. J. Cutler, "	L. L. Ducher, St. Alban's Vermont.
G. A. Kimball, Haverhill.	Wm. H. Kelth, "	E. Waldo Cutler, "	J. P. Cook, Lewiston, Me.
M. H. Gleason, Boston.	J. C. Howe, Boston, Ms.	B. F. Brown, "	T. Wheeler, Boston, Ms.
G. Moore, Gt. Falls, N.H.	Ed. G. Frothingham, Jr., Haverhill, Mass.	W. F. Phillips, Portland, Me.	Edmund Dana, Jr. Portland, Me.
W. Baker, Brunswick, Me.			
E. H. Rollins, Concord.	H. M. Whitney, Lawrence, Mass.	A. R. Bailey, Cambridge-	
C. E. Field, Chelsea, Ms.			

The convention balloted, and the gentlemen on the lists were elected by a vote of thirty-seven in the affirmative, and none in the negative.

The matter of names of other parties, who had been proposed as members, was next taken up. It was explained that these parties were not eligible under the constitution, although they were worthy men, some of them chemists, and dealers in eclectic medicines.

Mr. Brewer, of Boston, moved to refer these names again to the executive committee.

Mr. Edward Parrish, of Philadelphia, thought dealers in eclectic medicines were, or should be eligible as pharmacutists.

The chairman remarked that this was a matter of much importance, and demanded careful attention.

Mr. Parrish said he was opposed to letting in quacks, but chemists and many other useful men of practical knowledge were kept out by the constitution.

Henry T. Cummings, of Portland, Maine, was in favor of admitting all persons properly advanced in pharmacy, but the selection from chemists, etc., should be as careful as possible.

Mr. Charles Ellis, of Philadelphia, thought the rules should be altered, before admitting a new class of men to the society.

Mr. Thomas Hollis, of Boston, thought the society would be strengthened by the addition of scientific men.

Mr. Wm. Procter, Jr., of Philadelphia, thought something should be done to relieve the committee of unpleasant responsibility.

The motion to refer these names back to the executive committee then prevailed.

Mr. Colcord, of Boston, wished to know whether the convention had a right to inquire if delegates to the convention from the subordinate societies were not chemists, or men of that character.

Mr. Parrish, of Philadelphia, thought the convention had no right to inquire the standing or occupation of delegates.

The calling of the roll of members being in order, Mr. Colcord, of Boston, suggested that it be called from the book of signatures present.

That list was accordingly read, and seventy-nine gentlemen answered to their names.

NEW YORK.			NEW HAMPSHIRE.		
Fred. Hale, N. Y. city.	A. Boyden, Boston.	W. Procter, Jr., Philad.	C. A. Tuttle, Dover,		
E. R. Squibb, "	M. H. Gleason, "	E. Parrish, "	O. G. Dort, Keene,		
P. W. Bedford, "	G. D. Torme, "	F. L. John, "	J. Morgan, Concord.		
A. Cushman, "	M. D. Colby, "	F. C. Hill, "	VERMONT.		
J. Coddington, "	Thos. Doleber, "	Ambrose Smith, "	E. A. Moore, Rutland.		
John D. Dix, "	G. W. Woodbridge, "	W. H. Pile, "	CONNECTICUT.		
H. T. Klersted, "	J. T. Campbell, "	D. S. Jones, "	H. F. Fish, Waterbury.		
John Meakim, "	D. Henchman, "	S. S. Bunting, "	RHODE ISLAND.		
H. Haviland, "	T. Hollis, "	Chas. Bullock, "	R. J. Taylor, Newport.		
G. W. Berrian, Jr. "	W. A. Brewer, "	S. S. Garrigues, "	TENNESSEE.		
Geo. Thurber, "	S. M. Colcord, "	A. B. Taylor, "	J. Jackson, Knoxville.		
Wm. Hegeman, "	C. T. Carney, "	L. Neal, Lancaster.	MICHIGAN.		
G. H. De La Vergne, "	A. P. Welsar, "	MARYLAND.	Fred. Stearns, Detroit.		
J. T. King, Middletown.	J. Emerton, Salem.	I. J. Grahame, Baltimore	ILLINOIS.		
A. S. Lane, Rochester.	J. Buck, Chelsea.	N. H. Jennings, "	E. O. Gale, Chicago.		
MASSACHUSETTS.			NEW JERSEY.		
T. S. Harris, Boston.	H. Thayer, Cambridge.	H. A. Elliot, "	J. Stratton, Bordentown.		
G. H. Chapman, "	E. Blatchford, Rockport.	Jas. Balmer, "	GEORGIA.		
H. W. Lincoln, "	M. S. McCurville, Wor'r.	J. Roberts, "	R. Battey, Rome.		
H. D. Foule, "	D. Scott, Worcester.	A. P. Sharp, "	F. G. Greive, Millidgev'e		
J. Gorden, "	E. G. Frothingham, Jr.,	MAINE.			
J. S. Melvin, "	Haverhill.	H. T. Cummings, Portl'nd			
C. H. Lyon, Jr. "	A. S. Jones, Newburyp't.	T. R. Philbrick, "			
	PENNSYLVANIA.	J. G. Cook, Lewiston.			
	Chas. Ellis, Philadelphia.				
NORTH CAROLINA.—R. B. Saunders, C. Hill.			MINNESOTA TER.—J. W. Callan, Fairbault.		

Reports from standing committees were called for, but few of the committees reported. It was decided to take up these reports this (Wednesday) forenoon for discussion.

Mr. Brewer, of Boston, presented papers received through the president, Mr. Kidwell, of Georgetown, D. C., from the agricultural bureau of the Patent Office, and the Department of the Interior. Among them was the following letter from "Kit Carson," an agent who had been requested to obtain information respecting medicinal plants in use by the Indians:—

UTAH AGENCY, TAOS, N. M., June 15, 1859.

SIR.—Circular from your office, dated April 30, 1859, I have the honor to acknowledge. The only reply I can make is to send you roots and herbs, stating for what used by the Indians. The names are only known to themselves. They are gathered in the mountains. The samples I send are used by the Jicharilla Apaches. I will send, from time to time, such as are brought to me by the Indians. They are found in latitudes 37°, 38°, and 39°. Obtained in small quantities, seven hundred miles from navigable streams, the only facility of sending them to market is on pack mules.

I have the honor to be, very respectfully,

Your obedient servant,

C. CARSON, Ind. Agt.

Hon. Com. Indian Affairs, Washington, D. C.

A letter was received, accompanying the Swiss Journal of Pharmacy, and asking for an exchange of plants, from E. Ringk, vice-president of the Swiss Apothecaries' Association.

The executive committee then made their annual report, through their chairman, S. S. Garrigues, of Philadelphia, and the report was accepted. The report states that the Journal of Proceedings of last year contains four hundred and eighty-eight pages, and cost nine hundred dollars. Many copies had been distributed and sold, and others remain on hand. The association had failed

to obtain a charter from Congress, and this subject the convention referred back to the committee.

The following gentlemen were appointed a committee to nominate officers for the ensuing year:—H. W. Lincoln, Boston; W. Hegeman, New York; Charles Bullock, Philadelphia; Israel J. Grahame, Baltimore; J. M. Cullan, Washington; C. A. Tufts, New Hampshire; Ed. Parrish, Philadelphia; A. P. Sharpe, Maryland. They will report this forenoon.

The convention then adjourned till nine o'clock the following morning.

SECOND DAY.

The convention was called to order at half-past nine o'clock, and the minutes of the preceding day were read and approved.

Several members of the association not present yesterday came in and registered their names.

E. O. Gale appeared as a delegate from the Chicago college of pharmacy.

The executive committee nominated the following gentlemen, and they were elected members of the association:—

J. Lindley Pyle, Brooklyn, N. Y.; Cyrus Pyle, Brooklyn, N. Y.; Uriah B. Wilson, Ann Arbor, Mich.; Samuel P. Duffield, Detroit, Mich.; F. F. Mayer, New York; Joseph T. Brown, Boston; Benjamin Proctor, Lynn; Samuel A. Smith, Newburyport; M. D. Colby, Boston; George Woodbridge, Boston; R. J. Taylor, Newport, R. I.; Joel S. Orne, Cambridge; Francis D. Hardy, Jr., Cambridge; Wm. T. S. Cardy, Chelsea; W. Atwood, Portland, Me.; Luther Atwood, Brooklyn, N. Y.; Corydon E. Tyler, New York; Samuel Noyes, New Haven, Conn.; James M. B. McNary, Hartford, Conn.; H. H. Burrington, Providence, R. I.

Dr. Henry T. Cummings, of Portland, presented the following:—

Voted, That the name or title of the American Pharmaceutical Association shall not be employed by any of the members thereof, upon signs or labels, or in advertisements, in a manner to compromise the association in respect to its approbation or endorsement of any species of nostrums or proprietary preparations.

This was withdrawn, to give place to other business.

The committee on nominations reported the following list of officers for the ensuing year:—

President.—Samuel M. Colcord, Boston Mass. *1st Vice President*.—Wm. Procter, Jr., Philadelphia. *2d*.—Joseph Roberts, Baltimore. *3d*.—Edwin O. Gale, Chicago. *Recording Secretary*.—Charles Bullock, Philadelphia. *Corresponding Secretary*.—Wm. Hegeman, New York. *Treasurer*.—Ashael Boyden, Boston, Mass. *Executive Committee*.—Chas. F. Carney, Boston; Chas. A. Tufts, Dover, N. H.; S. S. Garrigues, Philadelphia; George W. Berrian, Jr., New York; Charles Bullock, Philadelphia. *Committee on Progress of Pharmacy*.—Edward Parrish, Philadelphia; Alpheus P. Sharp, Baltimore; Eugene S. Massot, St. Louis; James N. Callan, Washington, D. C.; William Hegeman, New York.

The persons above named were unanimously elected.

Samuel M. Colcord, of Boston, the president elect, was conducted to the chair by a committee appointed for that purpose, after a brief and able address from the retiring chairman, Robert Battey, of Rome, Ga. He could not speak authoritatively of the progress of the association, but the large number of the members who answered to their names, yesterday, and the addition of new members, showed an increasing interest in its success.

He spoke of the necessity of securing a charter, and of having the Association represented in the next convention for the revision of the Pharmacopoeia. The difficulty in deciding who shall, and who shall not be admitted as members, was alluded to, and the careful consideration of the subject recommended. He suggested that the constitution might be altered, so as to allow of the election of associate members from among the chemists and similar professions.

Upon taking the chair, Mr. Colcord spoke of the manner of electing presidents from the place where conventions are held, as having the effect to debar from that office valuable members living in small places, and then proceeded to give a brief history of the organization.

The committee took a brief recess, and upon coming to order again, the other officers of the convention took the places assigned.

On motion of Mr. Meakin, of New York, the thanks of the convention were tendered to Dr. Robert Battey, for his address, and to the secretary *pro tem.*, Mr. Taylor, for his services.

It was decided to make the report of the committee on home adulterations the first business of the afternoon session.

A committee was appointed to take into consideration the order of business, acceptance of invitations, &c., as follows:—Thomas Hollis, of Boston; Stratton, of Philadelphia, and Bunting, of New Jersey.

Wm. Procter, Jr., of Philadelphia, from the committee on the progress of pharmacy, presented a long report, which gives a brief statement of discoveries, &c., and states what authorities can be referred to for full particulars. The report also contains brief accounts of the proceedings of the Philadelphia, New York, and Massachusetts colleges of pharmacy, and complains of the lack of interest in the association in New England. The Cincinnati college has done but little, and the Richmond college has abandoned the field. The Washington college has made little or no efforts at teaching, and no reports have been made from St. Louis and San Francisco.

A new college has been established at Chicago. Several new pharmaceutical journals have been established during the year, and some valuable works upon pharmacy published. Insufficient information in reference to the importation of drugs has been received. The demand for isinglass is growing less; twenty-four thousand cases of cod liver oil are obtained annually, between Boston and Eastport. Over five thousand cases of castor oil, of twenty gallons each, are received in Boston yearly, and movements are in progress to have castor beans imported direct from Calcutta.

The business of manufacturing chemicals is increasing in Baltimore, Philadelphia, New York and Boston. The report closes with noticing the decrease

of several eminent pharmacutists during the past year.

The report was accepted and referred to the executive committee with full powers.

Mr. Parrish, of Philadelphia, remarked that it would be useful to have reports of importations published, and it was suggested by Mr. J. D. Dix, of New York, that upon a proper representation to the Secretary of the Treasury, they could obtain authority to get the necessary information.

After some further remarks by Messrs. Parrish, Jones and Procter, of Philadelphia, the chairman, and Mr. Stearns, of Detroit, on motion of Mr. Procter, it was voted to refer this subject to a special committee, to report to-morrow. The committee consists of Messrs. Dix, of New York, Brewer, of Boston, and Procter, of Philadelphia.

Mr. Parrish, of Philadelphia, moved that a special committee be appointed to act upon the subject of obtaining an act of incorporation from Congress.

The chairman believed it was proper to have an act of incorporation, so that the association can sue and be sued—so that the committee on adulterations can publish names without being personally responsible.

Mr. Stratton, of New Jersey, thought if they had an act of incorporation they would be more likely to receive donations from individuals, or from Congress.

The motion of Mr. Parrish prevailed, and the committee will be appointed at the afternoon session.

Prof. Procter, of Philadelphia, submitted a motion for the appointment of a committee to examine specimens of drugs, &c., sent to the convention. Carried.

It was voted to hold an evening session, at half-past seven o'clock.

At one o'clock the convention adjourned till three o'clock.

SECOND DAY.—AFTERNOON SESSION.

The convention was called to order at half-past three o'clock, by the president, Mr. Colcord, of Boston.

Mr. Colcord, who was the treasurer the past year, submitted a report, showing that the cash on hand at this time is \$231. The association will have about \$700 towards publishing the proceedings of the present convention. Messrs. Charles Ellis, of Philadelphia, John Meakin, of New York, and Henry Haviland, were appointed a committee to audit the treasurer's account.

The Chair appointed the following committees:—

To Examine Specimens.—Messrs. Smith, of Philadelphia, Thurber, of New York, Procter, of Philadelphia, and Sharp, of Baltimore.

To petition Congress for an Act of Incorporation.—James N. Callan, Washington; E. H. Rollins, Concord, N. H.; W. A. Brewer, Boston; R. H. Stabler and J. L. Kidwell, of the District of Columbia.

The following persons were elected members of the association:—Chas. T. Pollard, Maysville, Cal.; Samuel Kidder, Jr., Lowell; and George C. Hunt, Jr., Frederickton, N. B. The president remarked that the last named is the first member out of the limits of the United States.

A communication was received from D. J. Brown, of the U. S. Patent Office,

suggesting that a committee be appointed to memorialize Congress for an appropriation to defray the expenses of attempting to raise medicinal plants not natives of this country. The communication was laid upon the table.

The committee on the president's address reported an amendment to the constitution, so as to allow chemists to become members of the association. The amendment lies over under the rules.

Mr. Chas. T. Carney, of Boston, from the committee on home adulterations, then submitted a report, which we publish in another place.

At the close of the reading of the report, the convention manifested its approval by continued applause. The report was referred to the executive committee.

An invitation was received to hold the next convention in New York, and another to hold it in Columbia, S. C.

On motion of Mr. Parrish, of Philadelphia, Dr. Charles T. Jackson was invited to take a seat in the convention. He, with several members, made remarks upon the subject of adulteration, a brief abstract of which we give at the close of the report of the committee on that subject.

An invitation was received from Mr. Cutting, of the Aquarial Garden, to visit that exhibition, and the thanks of the association were tendered therefor.

At six o'clock the convention adjourned till half-past seven.

EVENING SESSION.

Upon the table, in the evening, were several specimens of plants, received from the Department of the Interior, at Washington, including camphor and cork oak trees, shrubs of green and black tea, wild chamomile, and wax and soap plants. They were objects of much interest to the members of the association.

Upon coming to order, at seven and a quarter o'clock, a committee was appointed to select a list of subjects for next year's convention. Wm. Procter, Jr., Frederick Stearns, Charles T. Carney, and Israel J. Grahame.

Dissertations from members were next read, as follows:—

Edwin O. Gale, of Chicago.—“What is the character of the rosin weed of the Western prairies?” He thinks it can be substituted for mastic for chewing; it makes a fine varnish, is a sure cure for heaves in horses, allays irritation of the lungs; the prairies abound with it, but it is tedious to collect; it is not known whether it can be cultivated, and for the present, at least, it must be an expensive article.

Joseph Roberts, of Baltimore.—“The sediment deposited by wine of ipecacuanha.” He thinks the sediment not peculiar to wine of ipecacuanha, but is found in other extracts, and that it is deposited by the breaking up of the chemical composition. The deposit is so slight as to have but little effect upon the quality of the medicine.

Edward Parrish, of Philadelphia.—“The deteriorating of pharmaceutical preparations by keeping. The causes of injury, and the means of preventing it.”

Edward Parrish.—A paper from James O'Gallagher, of St. Louis, giving a synopsis of the history of pharmacy.

Dr. E. R. Squibb, of Brooklyn, N. Y.—“Mechanical preparation of mercury, with a new mercurial machine.”

At nine and three-quarters o'clock, the association adjourned to nine o'clock Thursday morning.

The following were the remarks of Mr. Colcord upon taking the chair as president of the association:—

GENTLEMEN-ASSOCIATES.—The honor you have conferred by electing me to preside over your deliberations, I accept with reluctance, on the score of my own personal disqualifications, though as a compliment in giving the office to Boston, and as the highest compliment from the association to me, I value it highly, as reposing confidence in one of your oldest members, who has always been ready to offer his views for what they are worth at a period in your history when there was no precedent to follow, and no landmarks to guide—at a period when a mistake in our organization might have proved fatal to the realization of our hopes.

Happily, those questions of a perplexing character that must necessarily arise and be settled, in the first efforts of our organization, in the general plan of our operations, have been met and settled; and it must be gratifying to you as to me, that it has been done without jar or discord—that all have been united in one common object—to promote the advancement of pharmaceutical skill and science throughout the land. To attain this end, we have thrown our doors wide open to welcome all well-wishers to our profession to unite with us to receive whatever of good we have to impart, and to do what they may for the benefit of our common cause.

How different are the circumstances under which we meet to day, our eighth anniversary, to what was our first meeting, with but nine members, strangers. An imperative necessity existed for associated effort to regulate and improve our profession. We then met without confidence in ourselves, and under a still greater embarrassment of having no leaders in our labors; strangers by reputation even to our distant brethren, how could we look with confidence to their support in the general apathy which all knew hung like an incubus over all ranks in our line of business.

I have said that an imperative necessity existed for such an organization, and that I can give as the only reason why we exist. All other trades and professions have their organizations for associated efforts, and as it is the general average of varied talent and ideas that make the unit nearest perfection, so we shall find it; every one has a mission to perform as well to his fellow as to himself. There is no one so humble in our ranks but can add something of value to our common stock. Then let us each lay aside excess of modesty as well as ostentation, and join head and heart in the work before us.

It is with these views and with these feelings that I accept the office with which you have honored me—not because I feel that you have made the wisest selection, and grave doubts that you have made a judicious one—but as no one can tell his capabilities until they have made the trial, and relying upon your

generous support and kind forbearance, I can only promise my best efforts for facilitating business, as well as for your general comfort and happiness while you remain in Boston.

And I feel sure that while I express myself personally at your disposal, I do but express the sentiments of the Massachusetts college of pharmacy, as well as the drug trade of Boston.

And I can but hope that you will consider us, individually and collectively, as a committee of the whole raised for your especial convenience during your sojourn with us—and make use of us accordingly.

THIRD DAY.

The convention came to order at a quarter before ten o'clock, at the call of the president, Mr. Colcord, of Boston.

The journal of yesterday was read and approved.

Mr. Charles A. Tuffits, of Dover, of N. H., offered resolutions of respect for the memory of Mr. S. P. Peck, of Bennington, Vt., formerly a vice-president of the association.

The resolutions were adopted.

The subject of "resignations" coming up, a resolution was adopted, authorizing the treasurer to accept the resignation of any member, upon payment of dues, and return of certificate, after remarks by the president, and by Dr. Squibb, of Brooklyn, Jones, of Philadelphia, and others.

The committee on weights and measures, through the chairman, Mr. A. B. Taylor, of Philadelphia, made a lengthy and very able report. The report says that all persons agree upon the necessity of a reform, but there is a diversity of opinion upon the best method of affecting it. The committee speak of the adoption of a decimal system, retaining the old names. They explain the French system, but object to its nomenclature, with its scientific jargon. There are objections to both of these systems which it is difficult to overcome, unless there be grafted upon them a system of halves and quarters. The new English system is described and objected to, as were other systems in use in other countries. The report explains at great length various systems and scales of nations, and recommended a new system. The report was referred to the executive committee, to be published with the proceedings, and also in a separate form.

Mr. Dix, of New York, said the people of France were becoming familiar to their new system of weights and measures, and he believed that there would soon be no objection to it,

Mr. Parrish, of Philadelphia, chairman of the committee on the revision of the Pharmacopœia, read a lengthy report recommending the transfer of articles from the secondary to the primary list, and the addition of new articles—mostly herbs—to each list. Many changes are recommended in the formula of medicinal preparations.

During the reading of this report, suggestions and observations were made by several members.

Dr. Squibb, Mr. Colcord, Mr. Parrish, Prof. Grahame, Mr. Dix, Mr. Meakim,

Mr. Tufts, Mr. Ellis and others, spoke of the proper specific gravity of ammonia, the difficulty of keeping it, and the cause of its explosion.

Some inquiry being made as to what should be done with this report, the chair suggested that delegates be appointed to the National Convention for the revision of the Pharmacopœia, to present it there.

Mr. Parrish thought it should be sent to that convention without being printed.

Dr. Squibb believed it should be printed, and believed the committee of revision would be glad to avail themselves of it. He was not afraid of the proceedings making too large a volume.

The chair entertained similar views, and thought by having the report printed, the value of its suggestions would be shown by experience.

Mr. Carney alluded to the benefit that had been derived from printing of similar reports.

Mr. Meakin thought the report should be published at once in a pamphlet form, and distributed through the country.

After further remarks by Messrs. Procter, Garrigues, and Battey, the report was referred to the executive committee, to publish at their discretion.

The convention then took up the subject of the place for holding the next convention; invitations having been received from Columbia, S. C.; Atlanta, Geo.; New York, and St. Louis. Dr. Battey, of Rome, Ga., spoke in favor of Atlanta, Ga.; Mr. Callan for St. Louis; Messrs. Coddington, Procter, Kiersted, Squibb and Meakin, for New York; and the chairman in favor of migrating from place to place. An adjournment was had without coming to a decision.

AFTERNOON SESSION.

The convention came to order, after the recess at four o'clock.

The executive committee presented the names of the following persons, as candidates for membership, and they were elected:—James Emerton, Salem; Wm. H. Ware, Gloucester; James A. Gleason, Samuel H. Woods, and Henry Warren, Boston; Rufus W. Stevens, Great Falls, N. H.; A. A. Dana, Providence, R. I.; B. F. Johnson, Philadelphia; Lewis Doane, Baltimore.

Mr. Brewer, from the committee appointed to co-operate with the agricultural department of the Patent Office, in introducing foreign medicinal plants, made a report, covering a voluminous correspondence between the committee and officers connected with the Patent Office. Several plants were also presented, which had been received from the Patent Office, with a statement of the manner of germinating and cultivating them. The correspondence states that efforts are being made to introduce the tree bearing Peruvian bark, now becoming scarce in South America. It also gives an interesting account of the early use of the Peruvian bark. The correspondence also describes several plants used for medicinal purposes by the Cherokees, many of them unknown to the profession. This report was referred to the executive committee.

The Chair appointed the following committee on adulterations for the ensuing year:—

Charles T. Carney, Boston; I. J. Grahame, Baltimore; Charles Bullock, Philadelphia; A. P. Sharp, Baltimore; E. R. Squibb, New York; E. S. Wayne, Cincinnati.

Frederick Hale, of New York, read an essay on fitting up and ornamenting drug stores, with reference to convenience and good taste.

Ambrose Smith, of Philadelphia, read a paper upon the decomposition of oxide of silver in pill matter.

Prof. Procter, of Philadelphia, presented a paper upon the obtaining of polygalic acid from senega, describing the process with minuteness, as well as the manner in which it may be administered as a medicine.

It was reported, in answer to inquiries made, that the production of Spanish saffron, (*crocus sativus*) in this country, had ceased as unprofitable.

Prof. Grahame, of Baltimore, read a paper on the best means of keeping vegetable extracts, especially those from narcotic plants, in the dispensing shop.

S. S. Garrigues read a paper from J. M. Maisch, of Philadelphia, upon the bark of the *cornus florida*.

A paper from Henry A. Tilden, of New Lebanon, N. Y., upon the relative value of imported and indigenous medicinal plants, was presented.

The committee appointed for that purpose reported the draft of a communication to the Secretary of the Treasury, asking for permission to publish lists of importations of drugs, &c. The report was accepted, and it was ordered that the communication be forwarded as proposed.

On motion of Mr. Brewer, of Boston, the plants received from the Department of the Interior were put in care of Prof. Gray, of the Cambridge botanical garden, for the benefit of the public.

The feasibility of raising *arnica* plants in this country, was discussed. Mr. Dix, of New York, said they could be obtained from Germany cheaper than the flowers could be picked here, if the fields were covered with them. He could obtain the seeds for any person who was desirous to see the plants growing.

Alexander Cushman, of New York, read a paper upon "pepsin." That obtained from the stomach of pigs he prefers; the French prefer that from the stomachs of sheep, and the English that from sheep and calves.

At about seven o'clock, adjourned till nine o'clock Friday morning.

FOURTH DAY.

The convention was called to order at half-past nine o'clock, by Prof. Procter, of Philadelphia, one of the vice-presidents, in the absence of the president, Mr. Colcord, of Boston.

Mr. Henry H. Fish, of Waterbury, Conn., offered a resolution that a committee be appointed to consider the propriety of holding alternate sessions in the cities of New York, Philadelphia, Boston, Baltimore, and Washington, and also the appointment of a permanent secretary at Washington.

The consideration of the resolution was deferred.

Prof. Procter read a paper upon "Improved Formula for the Fluid Extracts."

The following resolution, offered by Mr. Parrish, was adopted:—

Resolved, That the subject of offering prizes for scientific and other essays of merit, to be read at the next annual meeting, be referred to the executive committee, with power to offer such prizes, through the Pharmaceutical Journal, as they determine upon.

Dr. Battey, of Georgia, read an interesting paper on the production of sugar from the *sorghum saccharatum*, and gave a history of its culture in the United States. He believes that under favorable circumstances the proportion of sugar may be as high as eighteen per cent. The soil, season, and manner of culture have great effect upon the quantity and quality of the product. The cane should be cut when green and succulent, and he believes the syrup should be boiled rapidly and without stirring.

On motion of Mr. Charles Ellis, of New York, it was resolved to give an elegantly bound presentation copy of Pareira's *Materia Medica* to Prof. Wm. Procter, Jr., for his valuable researches and essay upon fluid extracts.

Mr. Parrish, of Philadelphia, read a paper upon mustards, and the best formula for a permanent liquid preparation of white or black mustard, as a substitute for mustard plasters.

S. S. Garrigues made some remarks upon the source of the odor of vanilla, as a substitute for a report upon that subject.

Mr. Stearns, of Detroit, presented volunteer papers upon the use of Catawba brandy and wine, in pharmacy, written by a Mr. Zimmerman, of Cincinnati. They were referred to the executive committee.

The subject of place for holding the next session came up, and Dr. Battey, of Georgia, said it was apparent that the majority were in favor of New York. He was willing to go to St. Louis the succeeding year, if the brethren from that place would meet him at New York next year.

Mr. Taylor, of Philadelphia, offered a resolution, deprecating the acceptance of hospitalities of their brethren at places where future conventions may be held.

Mr. Parrish seconded the resolve, and, after speaking of the generous hospitality extended to them in Boston, said he wanted the thing to stop here, so that they could go to small places without encumbering the few brethren there with the burden of entertaining them, when they were better able to entertain themselves.

Mr. Cushman, of New York, was opposed to the resolve, and thought these entertainments were very useful in making members acquainted with each other.

Mr. Garrigues expressed similar views, and the resolve was supported by Messrs. Meakim and Squibb, of New York; Battey, of Georgia, and Procter, of Philadelphia.

The resolution, having been amended, was laid over till next meeting.

Mr. Garrigues presented a paper from J. M. Maisch, of Philadelphia, upon

the behavior of essential oils to iodine and bromine, which was referred to the executive committee.

The executive committee presented the following names for membership, and they were elected:—John J. Tower, of Wilmington, Del., and E. A. Pond, of Rutland, Vt.

Mr. Cushman, of New York, presented a new apparatus for applying medicated vapors to the throat and lungs, which, from its form, is called "medicated cigar," accompanied by an explanation of the manner of its use.

It was voted not to publish the paper, as the "medicated cigar" is patented.

Mr. Coddington, of New York, read a paper on the probable influence of isomerism on the therapeutic power of substances.

Dr. Pyle, of Philadelphia, presented a table upon the specific gravity of water at various temperatures.

Prof. Procter presented a paper from F. F. Mayer, of New York (the president in the chair), upon liquor ferri iodide, and the tests of iodine.

Prof. Thacher presented specimens of a plant used as a substitute for the true arrow-root, accompanied by a statement of its characteristic.

Specimens were received from F. C. Hill, of Waltham, of cantharis, collected this morning. After some conversation, Mr. Hill promised to prepare a paper on canthares, for the next convention, with a view of ascertaining whether they can be substituted for Spanish flies for commerce.

A list of subjects to be investigated next year was presented by Prof. Procter, by a committee appointed for that purpose.

Mr. Ellis, from the auditing committee, made a report that the account of the treasurer of last year is correct. After some remarks from Mr. Colcord, a vote of thanks was passed to him for his services as treasurer.

The subject of dropping members who are three years in arrears with their dues caused some discussion, but it was decided to let the matter pass as it is,—the suspension list to be published in the annual list of the treasurer.

The president remarked that the Patent Office at Washington had paid the association a high compliment by sending Dr. Chas. T. Jackson to this convention as the bearer of papers from that department.

Mr. Smith, of Baltimore, from the committee appointed to examine specimens received by the association, made a report, which was referred to the executive committee.

The subject of altering the constitution, so as to allow chemists to become members of the association was postponed till next year.

Mr. Carney, for the executive committee asked for instructions in reference to publishing reports of proceedings. For himself, he was in favor of publishing very full reports.

Dr. Squibb, Mr. Parrish, Prof. Procter, Mr. Hegeman, and others were also in favor of full reports.

The president suggested that there was insufficient funds to publish the proceedings in full, and the executive committee would find themselves in difficulty when they began to look about for a publisher.

A motion of Dr. Squibb to assess the members for funds to publish the proceedings, was voted down, and a resolution presented by Mr. Hegeman, to ask for contributions for that purpose was adopted.

Dr. Battey, of Rome, Ga., offered a resolution which was adopted, thanking the Massachusetts college of pharmacy for the hospitalities received at their hands.

Mr. Parrish, of Philadelphia, offered a vote of thanks to the proprietors of papers that had published reports of proceedings, for their courtesy, and to reporters for their careful reports. Adopted.

Mr. Kiersted, of New York, offered resolutions of thanks to the president, secretary and treasurer, which were adopted.

It was voted to request of Dr. Robert Battey a copy of his remarks to the convention, while acting as chairman *pro tem.*, for publication.

The president was authorized to appoint, remodel, or fill committees in the recess.

The Chair expressed his thanks for the courtesy received at the hands of the convention; the minutes were approved, and at three o'clock the convention adjourned to meet in New York in September next.

Editorial.

WE have given a large amount of space to the proceedings of the American Pharmaceutical Association, and if any excuse is wanting it must be found in the value of this Association to every Pharmaceutist, and indirectly to the Medical Profession, as well as in the generally interesting character of its transactions.

The Association has now reached its eighth year, and some estimate can be formed of the growing interest in its aims and objects from the fact that its Proceedings, in full, will now occupy about 1,000 pages (having grown from a mere pamphlet), containing much matter of great practical value to the Pharmaceutical Profession. The Convention was largely attended by practical men, from all parts of the country; and the reports will be found to be made up mostly from careful observation and experience.

We publish all that we are able to do of the valuable report of the Committee on Home Adulterations: the conclusion will be given in our next issue, and as soon as possible we shall give a digest of all the most valuable reports and papers.

It is important that every apothecary should become a member of this Association, and thus avail himself of every advantage that may be derived from concerted effort in advancing the science of Pharmacy in our country. The expense of publishing the requisite edition of the Proceedings may exceed the immediate funds of the Society. To meet this want voluntary contributions would be acceptable, as well as the immediate payment of yearly dues and remittances to the Treasurer for copies of the Proceedings of the last Convention and those of previous years. No pharmacist can make

a better investment than by supplying himself with the volumes, as complete as may be, from the organization of the Society.

On Thursday evening, Sept. 15th, the Massachusetts College of Pharmacy gave a complimentary dinner to the American Pharmaceutical Association, and invited guests, at the American House. Thos. Hollis, President of the Massachusetts College of Pharmacy, presided.

The table was appropriately ornamented, and the bill of fare embraced all the delicacies of the season. When at length the cloth was removed, the President welcomed the guests to the banquet, and to the city of Boston, and introduced Mr. W. A. Brewer, of Boston, as toast-master, who read the first regular sentiment:—

"The American Pharmaceutical Association—Though but a child of eight summers, its rapid growth has given it the proportions of a giant. May its benevolent aims and professional achievements be felt and appreciated throughout the vast area of country from which its members converge to this pleasant festival."

Mr. Colcord, of Boston, the President of the American Pharmaceutical Association, responded.

2d Sentiment. "The honored Dead of the American Pharmaceutical Association—Andrew Geyer, Benjamin Canavan, Wm. Thomas, Henry Steiner, Elias Whitehead, Lewis Lehfuss, C. L. Bache, and E. P. Peck—May their memories be ever green, and their professional attainments and personal virtues always find a ready mention by their surviving brethren." [Drank standing, in silence.]

3d. "The past Presidents of the American Pharmaceutical Association—Though their official relations have ceased, their interest in our affairs, we are assured, will never cease while time with them shall last."

Mr. Meakim, of New York, responded.

4th. "Pharmaceutical Knowledge and Pharmaceutical Ethics—May their combined force elevate the profession and benefit mankind."

Mr. Henry D. Fowle, of Boston made a response to the above.

5th. "The Great West—Rich in natural resources and the products of her soil, but richer in the enterprise and talents of her sons."

Mr. Stearns, of Detroit, made a happy response. He closed with the following sentiment:—

"The Mortar—Not that silicious compound of lime and water—not the mortar of war, but the mortar of peace—the mortar and pestle."

6th. "The City of Boston."

In absence of Mayor Lincoln, ex-Alderman Carter spoke briefly.

7th. "The Medical Profession—Twin brother with the profession of Pharmacy—May the mutual interests which bind the two together, never be separated."

Dr. Minot, of the Boston Medical and Surgical Journal, responded.

8th. "The Pharmaceutical Convention of 1860: Medical and Pharmaceutical—May their labors result in an authoritative standard worthy of our country and the age."

Dr. Charles E. Buckingham, responded.

9th. "The Allies of Pharmacy—Chemistry, Mineralogy and Botany, different members of the same body of useful science."

In response to this sentiment, Mr. Charles T. Carney read "The Chemist's Dream," a most amusing paper, describing the wonders of the chemist's art.

Dr. Charles T. Jackson and Prof. Thurber also responded for mineralogy and botany.

10th. "The Retired Pharmacutists—Whether they may have been induced by the infirmities of age, by the allurements of a shorter road to fortune, or for the enjoyment of acquired wealth, the presence of their representatives assures us they did not leave the profession from disgust."

11th. "The Pharmaceutical Associations of New York, Philadelphia, Baltimore, Cincinnati, Washington, St. Louis—Like the heart of the human body, each is the vitalizing centre of Pharmacy in the great localities in which they exist."

Messrs. Jones, of Philadelphia, and Hegeman, of New York, responded.

12th. "Union—Pharmaceutical as well as Political—North, South, East, West, one and inseparable, now and forever."

This sentiment was received with three cheers, and at 12 o'clock the company retired from the table, well satisfied with the evening's entertainment.

T H E
JOURNAL OF MATERIA MEDICA
AND
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Remarks on *Lycopus Virginicus*, *Prinos Verticillatus*, and
Epiphegus Virginianus.

BY CHARLES A. LEE, M. D.

NUMBER XI.

LYCOPUS VIRGINICUS, (*Bugle Weed: Water Hoarhound*.)—The natural order, *Labiatae*, to which this plant belongs, includes a large number of plants, which have been employed, for a very remote period, as aromatic cordials and stimulants. Some of them are still retained, though many have been abandoned in modern practice. They all owe their activity to volatile oil, bitter extractive, and astringent matter. The volatile oil is found in small receptacles, or globular glands, contained in the leaves, in the form of an *oleo-resin*. The *bitter extractive* is found in all the *Labiatae*, and to this principle they owe their bitterness. If we add a ferruginous salt to an infusion of some of the *Labiatae*, a green color is struck, which indicates the presence of *astringent matter*. Their aromatic, carminative and stimulant properties are owing to *volatile oil*; their tonic and stomachic, to *bitter extractive*, or a peculiar bitter principle. The small quantity of tannic or gallic acid which they contain only serves to increase their tonic properties. Some of them are employed in perfumery, some in cookery; while others are used in medicine, to relieve nausea and colicky pains, expel wind, prevent or relieve griping, and cover the taste of unpleasant remedies. Although volatile oil is the

predominant proximate principle in plants of this order, yet some of them contain so large a quantity of bitter extractive as to render them highly valuable as stomachics and tonics; others possess peculiar, specific properties, adapting them to fulfil certain special indications. Among this latter class may be ranked the *Lycopus Virginicus*.

The European species has long been celebrated as a powerful febrifuge and astringent, well adapted to the treatment of fevers and hemorrhages, while the American species has but recently been introduced into practice. The bugle weed is a common, well-known plant, growing in shady and wet places, in most parts of the United States—flowering in August—and is often confounded with the *Lycopus Sinuatus*, or water hoarhound, whose medicinal properties, though similar, are far inferior to those of the *Lycopus Virginicus*. The whole plant is officinal, and has a peculiar, aromatic odor, and a disagreeable bitter taste.

Chemical Composition.—Although the bugle weed is officinal, occupying a place in the secondary list of the United States Pharmacopœia, its chemical composition had not been accurately ascertained until the recent analysis in your own laboratory. This shows that, in seven thousand parts, it contains—

Of inorganic matter, - - - - -	128
Of organic matter, - - - - -	6872
Total, - - - - -	7000
Gum and albumen, - - - - -	248
Tannin, - - - - -	40,
Bitter principle, soluble in ether, - - - - -	24
Particular bitter principle, insoluble in ether, - - - - -	696
Sugar, - - - - -	120
Extractive, - - - - -	232
Starch, - - - - -	172
Chlorophylle, - - - - -	220
Soluble salts, - - - - -	26
Insoluble salts, - - - - -	102
Lignin, - - - - -	5120
Total, - - - - -	7000

The large amount of bitter principle contained in the plant is worthy of particular note, viz.: seven hundred and twenty parts in seven thousand, or more than ten per cent.; while the amount

of tannin is inconsiderable. It contains no gallic acid.

Therapeutical Properties and Uses.—From the large proportion of bitter and astringent matter we might safely infer its tonic properties; but, in addition to its tonico-astringent power, it possesses a narcotic virtue, though not of an active kind. The peculiar alkaloid, or oleo-resinoid principle, to which it probably uses its tonic qualities, has not as yet been separated in an isolated form: the *lycopin* of some manufacturers being a powdered extract mixed with salt and other impurities. The *lycopus*, in certain pathological conditions, is a very valuable sedative astringent, especially adapted to cases of hemorrhage attended with frequent pulse and great nervous irritability. In such cases it often seems to prove specific, acting promptly and with great certainty in allaying irritability, while it controls the hemorrhage. It evidently strikes at the pathological cause, removing or correcting that morbid condition of the vascular and nervous system on which the hemorrhage depends; while it increases the tonicity and contractility of the minute capillaries, it diminishes the *vis-a-tergo*, by which the blood is propelled into them. The wild cherry bark possesses similar properties, though less strongly marked. We have used the *lycopus* successfully, for many years, in hæmoptysis, hæmatemesis, menorrhagia, &c., sometimes alone, at others in conjunction with other remedies; and we have come to regard it, in certain cases, almost in the light of a specific. We are inclined to consider it best adapted to cases of bleeding from the lungs, though some practitioners regard it as most efficacious in hemorrhage from the stomach. It has been known to arrest epistaxis, when all other remedies have failed. Certainly, as a popular remedy in spitting of blood, there is no indigenous production that ranks so highly as this. Its great power, as already stated, is doubtless owing to its sedative influence over the circulatory and nervous system, while, at the same time, it constricts the smaller vessels. The late Prof. Rafinesque, whose knowledge of our indigenous botany was very accurate and extensive, remarks as follows:—"I consider the bugle weed a very good substitute for all narcotics, prussic acid, and even bleeding, since it produces the same state of the pulse and arterial system, without inducing any debility, or acting on the heart and brain in any injurious manner." While we do not admit that any vegetable remedy is

a perfect substitute for blood-letting, in all cases, it must nevertheless be conceded that the bugle weed will moderate the force and frequency of the pulse, and thus accomplish one of the important indications of bleeding, unattended with the danger of relaxing the minute vessels—the source of the hemorrhage. We have called the lycopus a *tonic*, though its tonic properties are not strongly marked. In this respect it yields to the cerasus; it checks the secretions like most astringents, while it quiets the circulation and allays inordinate irritability. These properties render it useful in most cases of excessive flux, associated with such a condition. Besides the various forms of hemorrhage above mentioned, it will be found well adapted to many cases of diabetes, senile cough, humoral asthma, chronic diarrhoea, &c. In the latter, when caused by irritation, it proves particularly serviceable, after thorough evacuation by castor oil. The European species has been found very efficacious as a remedy for intermittents, given in powder previous to the access, and it is very probable that our own species possesses similar properties. It seems to have been used from time immemorial, as it is mentioned in the most ancient records. It forms a very good black dye, and Withering says that gipsies stain their skin with it.

The physiological effects of the bugle weed are such as might be inferred from what has been already stated in regard to its therapeutic effects. Taken in health, in the form of a strong infusion, in doses of a wine-glass full every two hours, it abates the force and frequency of the pulse, without nausea or cerebral disturbance, while at the same time it causes slight constipation.

Preparations.—Infusion, decoction, fluid extract, syrup, tincture. The infusion, made by pouring a pint of boiling water to an ounce of the dried plant, is the most frequent form of administration. Of this, in hæmoptysis, a wine-glass full should be given as often, at first, as every half hour or hour, according to the urgency of the symptoms. The *fluid extract* from your establishment has proved a reliable preparation, in doses of from one to two drams every two hours. A good extemporaneous effusion is made with one ounce of the fluid extract to one pint of water; dose, two to four ounces. The syrup may be prepared from the infusion, or by mixing three ounces of the fluid extract with twelve ounces of simple syrup; dose, one to two ounces.

PRINOS VERTICILLATUS, (*Black Alder: Winter Berry.*)—Three species of *Prinos* are indigenous to the United States, viz.: the *laevigata* (*smooth winter-berry*), *glabra* (*inkberry*), and *verticillatus* (*black alder, &c.*) The black alder is a well-known bush, growing in almost all parts of North America, in low, wet places, as swamps, the borders of streams, ponds and ditches, and is characterized in winter by its glossy, scarlet, round berries, about the size of a pea, containing six cells and six seeds. The bark is officinal. The berries have a sweetish-bitter and somewhat acrid taste, and possess similar properties to the bark.

Physical Properties and Chemical Composition.—The dried bark of the black alder has a smooth epidermis, and a whitish, ash-grey, mixed with a brownish color. The bark is in rolled pieces, has a bitter and slightly astringent taste, and is easily pulverized. Internally it is of a greenish-white color. It yields its principal properties to boiling water: to be collected in the spring or fall of the year.* Good descriptions of the plant may be found in the Medical Botanies of Bigelow and Barton. * The only analysis of this plant is that recently made in your laboratory, which gives, in seven thousand parts, of—

Organic matters,	- - - - -	6360
Inorganic matters,	- - - - -	640
Total,	- - - - -	7000
Albumen and gum,	- - - - -	218.08
Sugar,	- - - - -	10.88
Extractive matter,	- - - - -	100.88
Tannin,	- - - - -	332.00
Particular principles,	- - - - -	404.86
Resin, soluble in ether,	- - - - -	24.00
Resin, insoluble in alcohol,	- - - - -	141.00
Soluble salts,	- - - - -	139.20
Insoluble salts,	- - - - -	500.80
Inorganic, &c.,	- - - - -	5128.96
Total,	- - - - -	7000.00

Comparing this analysis with that of preceding plants, already given, the results, as regards astringent matter, are as follows:—

Tannin,	GEUM. 584	HAMAMELIS. 400	RHUS. 375	QUERCUS. 336	PRINOS. 332
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This shows that, as to the quantity of tannin, the black alder ranks among the first class of indigenous plants, and, so far as medicinal properties can be inferred from chemical composition, it will scarcely prove inferior to any. Clinical experience also abundantly confirms this conclusion. The amount of resin also contained in it is worthy of note (one hundred and sixty-one parts in seven thousand), and among the "particular principles" will doubtless yet be discovered a peculiar bitter resinoid principle, to which its tonic properties are chiefly due. Its soluble and insoluble salts are also abundant, while the albumen and gum are less predominant.

Therapeutical Properties.—The bark of the black alder has long been used and esteemed in domestic practice as a valuable tonic and astringent. A knowledge of its medicinal virtues, as in many other cases, seems to have been derived from the Indians, who used a strong decoction of it, both internally and as a wash, in chronic cutaneous eruptions and ill-conditioned ulcers, for which purpose it is still very often employed. Schoeph, who was the earliest writer who noticed it, speaks of it as a useful remedy in gangrene and jaundice. In popular practice it is in common use in the treatment of diarrhoeas and intermittents, and also as a tonic in dropsical conditions. Both the berries and bark have tonico-astringent and alterative properties, and have been used successfully in arresting the paroxysms in fever and ague, also in many affections connected with a debilitated state of the system, especially gangrene and mortification. We have known a strong decoction of it used with advantage in chronic bowel affections, connected with relaxation. In fact, it can fulfill with great certainty the various indications met with by this class of remedies. It is praised highly by Dr. W. P. C. Barton, while Dr. Darlington thinks its virtues overrated. (*Flora Cestrica*, p. 214.) Prof. Bigelow states that "the black alder has had a considerable reputation as a tonic medicine, perhaps more than it deserved," while the late Prof. B. S. Barton considered it superior to Peruvian bark in many cases, and as possessing great efficiency in cases of incipient sphacelus or gangrene, used locally and internally. Dr. Thacher strongly recommends it, used in the same manner, in herpetic eruptions. Dr. Bigelow seems to have judged of its medicinal properties simply from its physical and sensible effects. Be-

cause not very bitter to the taste, he concluded that its tonic properties were very inconsiderable, and so also in regard to its astringency. As the chemical tests show a larger per centage of tannin than we should have inferred from the taste, so also clinical experience demonstrates more tonic power than would be predicated from its bitterness. The fact is, however, that in no case can we safely predict the therapeutical from the sensible properties of a drug. Bitterness and stipticity are only two qualities from which medicinal virtues may be inferred: all tests of tonic agents, as well as most others, are ambiguous, except those made at the bedside of the sick. The small, tasteless doses of Fowler's solution have often as great antiperiodic power as the bitter quinine. The tasteless pulv. ferri. has wonderful efficacy, and the sapidless bismuth is not destitute of important medicinal powers.

Preparations.—Decoction, fluid extract, tincture, syrup, lotion, compound infusion, &c.—The *decoction*, which is generally regarded as the preferable form, is usually made with two ounces of the bark to three pints of water, boiled to a quart, of which a gill may be taken three times a day, or oftener. This may answer well for external use, but, as water alone does not take up all the active principles, the *fluid extract* is preferable for internal use, as it combines all the valuable properties of the plant. It may be given in sweetened water, in doses of one or two drams. A saturated tincture may be made from the bark or berries, and used in the same doses; or, what is equivalent, two ounces of the fluid extract may be added to one pint of diluted alcohol, of which the same quantity may be given. The alcohol, however, in many cases, would be objectionable. A *syrup* of alder is best prepared by mixing four ounces of the fluid extract with twelve ounces of syrup; dose, one or two ounces. For a *lotion* a strong decoction will suffice, or three ounces of the fluid extract may be added to eight ounces of water.

EPIPHEGUS VIRGINIANUS, (*Beech Drops: Cancer Root.*)—The order *Orobanchaceæ* yields two North American genera, viz.: the *Orobanche* and the *Epiphegus*—the latter so called from its supposed parasitic connection with the roots of the beech tree. The latter is sometimes erroneously described under the name *orobanche*, as in the United States Dispensatory of Wood & Bache; but although their general aspect and medicinal properties are

very similar, yet they are known to be entirely distinct genera.

The epiphegus is a branched, leafless plant, about one foot high, with remote, alternate flowers scattered on each branch, with recurved corollas, brownish white, with darker stripes above. It is a fleshy plant, with a tuberous, scaly root, and a smooth stem, furnished with small, ovate scales of a yellowish or purplish color, and wholly destitute of verdure. The plant is of a dull reddish color; the root is a scaly ball or tuber of a clay color, and covered with stiff, short and brittle radicals. The plant is abundant in almost all parts of the United States, and is chiefly found growing on the roots of the beech, or its immediate vicinity.

Physical and Chemical Characters.—The beech drop has a very bitter, nauseous, astringent taste, which is considerably diminished by drying. Your recent analysis gives, in seven thousand parts—

Organic matter, - - - - -	6680
Inorganic matter, - - - - -	320
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Total, - - - - -	7000
Albumen and gum, - - - - -	286.96
Starch, - - - - -	263.20
Bitter principle, - - - - -	898.72
Extractive matter, - - - - -	388.40
Tannin, - - - - -	474.08
Soluble salts, - - - - -	175.04
Insoluble salts, - - - - -	144.96
Lignin, &c., - - - - -	4414.64
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Total, - - - - -	7000.00

Therapeutical Effects.—The very large amount of tanin (474) contained in this plant (larger than in any other yet noticed except the geum), as well as bitter principle (898), commend it to the profession as worthy of greater attention than it has yet received. That the root is one of our most powerful astringents has long been known, and for this purpose it has been successfully employed by many physicians, as well as in domestic practice. Combined with arsenious acid, sulphur, and the root of the ranunculus acris, it formed the celebrated "cancer powder"* of Dr. Mar-

* NOTE.—The cancer plasters now employed by empirics, and which are claimed to be of vegetable origin, owe their activity to some mineral agent,

tin, a preparation still extensively used by empirics. It evidently, however, serves no other purpose than that of a diluent. We know it to be a very painful application, and in a large majority of cases to prove highly injurious, aggravating all the symptoms and hastening the progress of the ulceration. Dr. Barton, however, states that it has proved of great service, externally applied to obstinate ulcers, some of which had resisted the applications that are commonly made use of in such cases. Prof. Eberle recommends a strong infusion of the root in aphthous ulcerations of the mouth, and as a wash in obstinate herpetic eruptions. As a remedy for dysentery, its reputation among the common people

the vegetable powder or extract merely serving to obviate or lessen their activity. Thus "Plunkett's cancer plaster" consists of arsenic, sulphur, and the powdered leaves of crowfoot (*ranunculus*) and *cotula foetida*, levigated, and made into a paste with the white of egg. "Davidson's remedy for the cancer" consists of arsenious acid and conium. "Clason's cancer salve" consists of sulphate of zinc (exsiccated) and extract of blood-root, incorporated together. This acts slowly, and is kept applied for several weeks, producing but slight pain, and in obstinate sores and ulcers of the lips, face, &c., not cancerous, has been known to effect cures. In true scirrhus, however, or open cancer, we have never known the slightest benefit to result from its use. In all cases of cancer of the breast it aggravates and hastens the progress of the disease. The plaster of Dr. G. T. Blake, of New York, consists of chloride of zinc and blood-root. It is applied from fifteen to sixty minutes, destroying the vitality of all the parts with which it comes in contact. Obstinate sores and ulcers are thus often cured. It is to be noted that most sores on the lips, especially in persons of scrofulous and unhealthy constitutions, are ulcers—sometimes malignant, but rarely cancerous—and are kept from healing by the constant movement of the lips, the flow of saliva, &c.; and they are not unfrequently cured by instituting a new action by escharotics, with internal alterative treatment. Dr. Beach's "vegetable cancer plaster" is made of caustic potash, by leaching hickory ashes, and boiling to an extract, which is applied as a plaster. His "discutient ointment" is made by evaporating a spirituous infusion of the root of *solanum dulcamara*, the leaves of stramonium, conium and belladonna, and the roots of yellow dock and poke (*phytolacca*), to which fresh butter is added. The inspissated juice of the poke-root is used by some of the eclectics as a mild escharotic. In some sections of the country the narrow-leaved dock-root, used locally and internally, is believed to cure all cancerous complaints. Cosme's "cancer powder" is composed of white arsenic, ʒij.; charcoal, grs. xii.; cinnabar, ʒij.—well powdered and mixed. Dr. Fells' celebrated application, used in St. Bartholomew's Hospital, and borrowed from a New York quack, is chloride of zinc and blood-root! These may serve as samples for the whole.

seems too well established not to have some foundation to rest upon. We have seen and known enough of its use to satisfy us that it is well calculated to fulfil all the indications usually met by medicines of the tonico-astringent class. In certain diarrhoeas, dysenteries, and other fluxes, especially in the bronchorrhea of old people, and that which occurs after measles in patients much debilitated, and in the various hemorrhages, for which other astringents are prescribed, this article will be found well adapted.

The *Oribanche Americana* (broom rape) has astringent and tonic powers similar to those of the epiphegus, though less strongly marked. In the Western States it is very generally regarded as a specific for gonorrhœa and syphilis: it is also used in obstinate ulcers, apthæ, and herpetic affections.

Preparations.—The preparations of these plants are the same as the other astringent substances already described, viz.: decoction, infusion, fluid extract, syrup and tincture. No fluid extract of it is yet prepared. The decoction and infusion would only take up a portion of the active principles.

A few other indigenous astringents remain to be considered, which will be treated of in the ensuing number of the JOURNAL.

Remarks on Concentrated Preparations, Simple Tests, and Easy Method of Analysis.

IN our last we indicated a general process for ascertaining the substances with which *Concentrated Preparations* are often adulterated, and which are likely to be employed for that purpose.

We now purpose, before treating upon each article separately, giving the general process of analysis, *quantitatively* :—

CLASS I.

1. *Mixture of Resinoid with Alcoholic Extracts.*—Take ten grains of the substance to be analyzed, dissolve it in concentrated alcohol, evaporate to a syrupy consistence, add water (which will give a precipitation of the active principle), filter, and dry. The water holds, in solution, a portion of the extract which has been mixed with it. If the article is pure, the loss of weight by analysis will be comparatively small.
2. *Mixture of Resinoid with Hydro-Alcoholic Extract.*—Take ten

grains of the substance, treat with alcohol as in 1; the part insoluble in alcohol should be treated by diluted alcohol, or proof spirit, evaporated and weighed; or, treat the article first with diluted alcohol, which will dissolve the hydro-alcoholic extract.

3. *Mixture of Resinoid with Aqueous Extract.*—Treat ten grains of the substance by hot water, which will dissolve the aqueous extract; evaporate to dryness, and weigh. The residuum insoluble in water, dried and weighed, gives the quantity of active principle present.
4. *Mixture of Resinoid with Sugar of Milk.*—Treat ten grains of the concentrated alcohol, and filter; collect the insoluble residuum on the filter, wash it with alcohol, dry, and weigh. This gives the sugar of milk; the alcohol solution evaporated to dryness gives the amount of active principle.
5. *Mixture of Resinoid with Salt.*—Proceed the same as in 4.
6. *Mixture of Resinoid with Magnesia, or Carbonate of Magnesia.*—Proceed same as in 4.
7. *Mixture of Resinoid with Dried Plant, (in powder.)*—Proceed same as in 4.

CLASS II.

1. Alcoholic extract alone.
2. Mixture of alcoholic and hydro-alcoholic extracts.
3. Mixture of alcoholic and aqueous extracts.
4. Mixture of alcoholic extract and sugar of milk.
5. Mixture of alcoholic extract and salt.
6. Mixture of alcoholic extract and magnesia, or carbonate of magnesia.
7. Mixture of alcoholic extract and dried plant.

The process of analysis for determining the above are the same as described in class I.—1, 2, 3, 4, 5, 6, 7.

CLASS III.

1. *Hydro-Alcoholic Extract alone.*—Treat ten grains of the mixture by alcohol (proof), which will usually dissolve the whole. Should it not, employ alcohol of 56°.
2. *Mixture of Hydro-Alcoholic and Aqueous Extract.*—Treat ten grains by alcohol at 56°, which will dissolve the hydro-

alcoholic extract; evaporate to dryness, and weigh. This gives the hydro-alcoholic extract. Treat the insoluble residuum by water, evaporate to dryness, and weigh. This gives the aqueous extract.

3. *Mixture of Hydro-Alcoholic Extract and Sugar of Milk.*—Treat ten grains by alcohol (proof), which will dissolve the hydro-alcoholic extract; evaporate to dryness, and weigh. We then have the quantity of *hydro-alcoholic extract*. The insoluble residuum, dried and weighed, gives the sugar of milk.

The diluted alcohol, or proof spirit, may contain a little sugar of milk, dissolved by the water present. To determine the quantity, if desired, pass the solution through animal charcoal, evaporate to dryness, and the weight of the residuum gives the quantity of sugar of milk.

4. *Mixture of Hydro-Alcoholic Extract and Salt.*—Treat ten grains with water. To the solution add an excess of nitrate of silver; filter, wash the precipitation, dry, and weigh it. Its weight (x) gives the quantity of salt by the following equation:—

$$\frac{x + 56,5}{141,5} = x \text{ salt.}$$

If the conveniences for the above process are not at hand, treat ten grains by cold water; evaporate the solution to dryness, and weigh. Its weight gives approximately the quantity of salt present.

5. *Mixture of Hydro-Alcoholic Extract and Magnesia, or Carbonate of Magnesia.*—Treat ten grains by alcohol (proof), and then by water; evaporate both solutions to dryness, and weigh. This gives the quantity of extract present. The insoluble residuum, dried and weighed, indicates the magnesia, or carbonate of magnesia, present.
6. *Mixture of Hydro-Alcoholic Extract and Dried Plant.*—Proceed same as described in 5.

CLASS IV.

1. *Aqueous Extract alone.*—Treat ten grains by hot water, which should dissolve it entirely, or treat by strong alcohol, which will dissolve the coloring matter and some other principles; filter, dissolve the residuum in a small quantity of water,

evaporate to a syrupy consistence, add concentrated alcohol, which will precipitate the gum, albumen, &c.

2. *Mixture of Aqueous Extract and Sugar of Milk.*—Take ten grains, dissolve it in a small quantity of water, add a small quantity of alcohol to precipitate the gummy and albuminous matter; filter, boil the filtered liquor for fifteen minutes with animal charcoal, filter, and evaporate the filtered solution to dryness. The weight of the residuum gives the quantity of sugar of milk present.
3. *Mixture of Aqueous Extract and Salt.*—Process same as in class III.—4.
4. *Mixture of Aqueous Extract and Magnesia, or Carbonate of Magnesia.*—Treat the mixture by water, filter, wash the residuum, dry it, and its weight will give the magnesia or carbonate present.
5. *Mixture of Aqueous Extract and Dried Plant (in powder.)*—Process same as in class III.—6.

Such are the methods to be employed generally. There are many exceptions, as we have previously mentioned, and shall more fully point out. As these preparations are a mixture of two or three different principles, we will, in future numbers, give the principal properties, reactions, &c., of each article, and the particular processes to test their purity.

A valuable Report to the Pharmaceutical Convention on Home Adulterations.

By C. T. Carney.

[Concluded.]

ADULTERATIONS.

Specimen No. 1.—This is an adulterated article of cubebs, with the false berry used for the purpose. These cubebs were purchased as a select and superior article; the fraud existing in them was not discovered for some time. The false berry is readily distinguished, however, as it is *bi-lobed*, while the cubeb is a single lobed berry. There exists in the lot of cubebs from which these were taken sixteen per cent. of false berries, *by weight*; they are heavier than the cubebs, and are, on that account, easily added in sufficient amount to vitiate the drug without attracting notice. Your committee have endeavored, without success, to ascertain the name of this false berry; it appears to be in-

ert and worthless, not possessed of any deleterious property other than that of reducing the strength of the powdered cubebs, which, in the amount present in sample under consideration, it does quite perceptibly.

Specimen No. 2 is French Lycopodium, which is adulterated with the starch of some species of lentil, apparently. The microscope reveals this adulteration at once, which otherwise might not be suspected. If treated with water and the solution of iodine, the presence of starch may also be detected. This drug is often adulterated with starch, pulverized gypsum, and even boxwood powder. By separating with water the heavier adulterations, they can be examined and recognized; the wood powder can be separated by means of a sieve.

The specimen under examination is part of a lot purchased in one-pound bottles, with a French stamp and label upon it. A portion of it having accidentally been wet the starch became "musty," revealing its presence, otherwise unsuspected. Subsequent examination, as above, furnished further proofs of its existence.

Specimen No. 3 is Para balsam copaiva. This contains from six to eight per cent. of heavy or fat oil.

Balsam copaiva is very largely adulterated. It often contains the resinous extract, by decoction, of the branches and bark of the *copaifera*, turpentine, colophony, and fat oils, particularly castor oil. The balsam adulterated with turpentine is not of so heavy consistence as the true balsam; it is more viscid, and sticks upon the sides of the bottles holding it. It may be very easily proved whether turpentine is present or not, by simply heating a drop of the suspected balsam, upon a sheet of glazed paper, over a spirit lamp; the oil of copaiva is first volatilized, and the odor of the turpentine is at once apparent.

Castor oil is the most dangerous adulterative, owing to the great similarity between that and true balsam. This may be detected by mixing three parts of the suspected balsam with one part sulphuric acid, and shaking with fifteen or twenty parts of alcohol of 36°. If the mixture separates, it indicates that the balsam is adulterated with castor; when pure there is no separation. This test will detect not less than one-ninth part of adulteration.

The presence of castor oil may also be detected by adding two parts of ammonia (22° Beaumé) to five parts suspected balsam, and shaking them together in a stoppered bottle. The mixture becomes viscid and "ropy," but very soon clears itself and becomes transparent, if pure.

It is whitened by agitation, on the contrary, if it contains castor oil. The only precaution to be taken, however, is that the temperature of the mixture should be from 50° to 60° Fah.; above or below this point the result is inaccurate, as, from 68° to 70° Fah. the mixture is transparent, whether pure or adulterated, and at 32° to 40° Fah. the pure balsam remains clouded.

The fixed oils may be discovered by heating a drop or two of the balsam upon paper. If the balsam is pure the volatile oil is driven off, leaving the resin homogeneous, transparent, and brittle; if it contains heavy or fixed oil the resin is surrounded by a greasy aureole, and is less brittle.

Finally, balsam copaiva is "made up" of the fat oils, as poppy and rape seed with turpentine. These mixtures, however, would deceive only the inexperienced. In all cases ethereal alcohol (four parts alcohol and one part ether) serves to recognize this fraud, this liquid dissolving only the true balsam, leaving the foreign matters.

Specimen No. 4 is powdered opium. This is a very poor specimen of powdered opium. It was sold at a high price, to a person not perfectly familiar with drugs, but to him it appeared so different from his idea of the article that he requested an examination of it. It is found to contain less than three per cent. of impure morphia, which is but one-third or one-fourth the amount considered to be the standard yield by United States Dispensatory. It is evident that this powder of opium could scarcely fail to disappoint the expectations of the physician. What article is used for adulterating this, your committee have not decided. It is possible that the opium was exhausted, in part, before drying and powdering.

Specimen No. 5 is balsam tolu, containing sixteen per cent. common resin. Balsam tolu is often adulterated with turpentine and various resins. It is easy to detect this fraud, by the peculiar resinous odor which the adulterated article gives off when burnt. It may also be distinguished by testing with sulphuric acid. The concentrated acid, added to the pure balsam, gives a cherry red liquor, without disengagement of sulphurous acid; the same acid, added to balsam adulterated with resin, gives a blackish brown liquor, with abundant disengagement of sulphurous acid.

Specimen No. 6 is powdered tartar emetic. This is largely contaminated with foreign bodies, containing as much as twenty-one per cent. of impurity. The impurity in it is doubtless owing to careless manufacturing, and as this article in powder is often made without proper and sufficient care being used in its manufacture, it is best for the pharmacist to buy none but the crystals, and, being assured of their purity, powder them himself.

The impurities most generally present in tartar emetic are uncombined cream of tartar, chloride of calcium, or potassium and sulphate of potassa. It also sometimes contains, as accidental contaminations, iron and tin. The uncombined cream of tartar may be detected by an acid solution of acetate of lead; the solution is made of thirty-two parts distilled water, eight parts crystalized acetate of lead, and fifteen parts acetic acid of 9°. The presence of cream of tartar is shown by the white precipitate produced in a solution of tartar emetic on adding a small portion of the lead reagent.

Chlorides of potassium or sodium, or chlor-hydric acid, may be detected by their affording a white "curdy" precipitate upon adding to a solution of tartar emetic a few drops solution nitrate of silver. This white precipitate, if *chloride of silver*, should be entirely soluble in ammonia.

This specimen under examination contains eight per cent. of chlorides. Sulphate of potassa may be detected by the white precipitate, insoluble in nitric acid, which is afforded by solution chloride of barium or nitrate of baryta.

The specimen under examination contains thirteen per cent. of sulphates.

Specimen No. 7 is cream of tartar. This article is one used largely, both as a medicine and in the preparation of food; it is worthy careful consideration, and your committee have given considerable attention to it.

Cream of tartar is very largely adulterated. Some of the articles used for that purpose are, in one sense, harmless—that is, not injurious to health—but many of them are decidedly pernicious, and all of them are to be condemned, because sold to deceive the community and enrich the adulterator.

Cream of tartar is adulterated with tartrate of lime, chalk, finely powdered white marble, sulphate of lime, sand, nitrate of potassa, alum, sulphate of soda, potassa, and chloride of potassium. It has been found to contain, as impurities, iron, copper, lead and arsenic.

The addition of starch, arrow root and other amylaceous substances, is well known; and the specimen under examination is only remarkable from the fact that it contains 68.33 per cent. of farinaceous substances as adulteration.

This was sold as *pure* cream tartar. The easiest way to detect the adulteration with starch or farinaceous substances is by testing a cold solution of the cream of tartar with solution of iodine. The characteristic blue “iodide of starch” will at once be apparent.

If we treat the cream of tartar with boiling water we dissolve all soluble substances, leaving behind the tartrate of lime, quartz, clay, sand, sulphate of lime, and other insoluble impurities.

Chalk or white marble may be discovered by the effervescence produced by the addition of a weak acid, as chlor-hydric or nitric.

Alum and sulphates of potassa or soda are shown to be present by the white precipitate, insoluble in nitric acid, produced by solution of chloride of barium; if a precipitate is produced in same solution by oxalate of ammonia, we know that lime is also present. Chloride of potassium is shown, by the white “curdy” precipitate, entirely soluble in ammonia, formed by adding solution of nitrate of silver to the cream of tartar solution.

The iron, lead and copper come from the vessels of these metals in which the cream of tartar is purified.

The solution of cream of tartar, tested with tincture of galls, takes a *black* color if iron is present; with ammonia, a *blue* color if copper be present; with iodide potassium, a *yellow*, if lead is present.

The presence of arsenic in cream of tartar, according to Dr. Bley, comes from the arsenical sulphur used in the “mustage,” or process for arresting fermentation in the “must” of grapes, which consists of burning sulphur in the casks, thereby liberating sulphurous acid. The arsenic may be detected by Marsh's apparatus.

Specimen No. 8 is acid sulphate of soda. This is the residue from nitric acid manufacturing. The nitrate of soda, or Chili saltpetre, is decomposed by sulphuric acid, and this article remains. It is largely used to adulterate cream of tartar and this.

Specimen No. 9 is one which contains this adulteration. This acid sulphate may be considered one of the injurious adulterations.

There is one drawback to its use, however, as a substitute for cream of tartar, and that is its deliquescence, or property of taking moisture from the atmosphere. It was once attempted to substitute it for cream of tartar in a "yeast powder," but, after having been put up, the article was obliged to be withdrawn from the market, because it destroyed the cans. Query?—Will the human stomach bear it better than a tin can?

Specimen No. 10 is the "great adulterator." This article, known by the above name, is selenite or sulphate of lime. It is imported into New York, and there powdered for use.

Specimen No. 11 is the "great adulterator" in its natural state, before being powdered.

Specimen No. 12 is cream of tartar, which is adulterated with the "great adulterator." As this substance is almost insoluble, any one can judge of the benefit to health that might arise from a long continued use of the article in the daily food.

The specimen of cream tartar under examination contains twenty-five per cent. of the "great adulterator."

Specimen No. 13 is a fatty residue from oil of lemon. This was obtained from a sample of oil of lemon of suspected purity, the last winter, and amounted to twenty-two per cent. of the whole weight of the oil. In cold weather it has a butyraceous consistence, but as it now appears is more fluid.

It is somewhat unusual to find an article of oil of lemon adulterated in this way; and your committee would call the attention of pharmacutists to this fact, as being evidence of a new practice in the way of fraud in this article.

Specimen No. 14 is capsicum, with adulteration of common salt. This can be detected by exhausting the pepper with water, evaporating to dryness, and testing residue by nitrate of silver for chlorine; the soda imparts its characteristic color of yellow to flame of burning alcohol.

Corrosive sublimate, sent from Kentucky, was proved to be adulterated with chloride of sodium (common salt), by the usual tests. The sample was too small to estimate the amount of impurity present, and we cannot show a specimen of it because it was all consumed in examination.

Specimen No. 15 is lunar caustic. This was sent from Kentucky also, having been purchased in New York, at a cost of \$1.20 per ounce, as a *pure* article. A great imposition was practised either by the seller or the manufacturer. Upon a careful examination it yielded only fourteen per cent. of chloride of silver, equivalent to about ten per cent. of metallic silver.

Had it been pure nitric it should have yielded sixty-four per cent. of metallic silver.

Specimen No. 16 is piperine, adulterated with yellow prussiate of potassa. This fraud can be easily detected by testing a solution of the suspected piperine with a per-salt of iron. The blue reaction is instantly produced, caused by formation of ferro cyanide of iron.

This reaction taking place while combining a recipe in which the piperine and a salt of iron was ordered, led to the detection of this fraud, otherwise un-

suspected.

Flowers or oxide of zinc: all specimens examined, except some German, proved to be merely the carbonate.

Specimen No. 17 is oil of bergamot. A lot of oil of bergamot, purchased at the market rates, and to all appearances a very fine article, proved to contain thirty per cent. of alcohol, by the usual test with graduated tube, and treatment with water.

Specimen No. — is oil of wormwood. As regards smell and taste this oil is unexceptionable. Its specific gravity is so low as to excite suspicion, and it proves to be adulterated with ether, upon a careful examination.

This fraud can be easily detected by the low boiling point, and specific gravity.

Gamboge (powdered)—Gamboge, 100 lbs.; tartrate of lime, 25 lbs.

Socotrine aloes are pure Bonaire, without adulteration.

Cream of tartar is adulterated with from ten to sixty-five per cent. of terra alba, or tartrate of lime, with about three per cent. tartaric acid.

Tartaric Acid (powdered)—Tartaric acid, 1000 lbs.; alum, from ten to thirty-five per cent.

Scammony, Aleppo (powdered)—Virgin scammony, 30 lbs.; cocoa beans, 80 lbs.; biscuit, 30 lbs.; lamp-black, q. s. (sufficient quantity) to color.

Bird Pepper (powdered)—Chilies, 1000 lbs.; rice, 800 to 1200 lbs.; curcuma and Venetian red to color.

Powdered Fenugreek—Fenugreek seeds, 1000 lbs.; biscuit, 1000 lbs.; curcuma, q. s. to color.

East India Rhubarb (powdered)—East India Rhubarb, 100 lbs.; English do., 60 lbs.

English Rhubarb (powdered)—English rhubarb, 100 lbs.; biscuit, 30 lbs.; curcuma, to color.

Turkey Rhubarb (powdered)—East India rhubarb and Turkey rhubarb, equal parts.

The tartrate of lime referred to is more properly sulphate of lime, with a small portion of tartrate. The ship biscuit is the hard and often worm-eaten cakes brought in by ships after a long voyage.

One of the members of your committee, who is acquainted with a gentleman formerly in the drug grinding business, in New York, has been kindly furnished by him with some formulas by which "pure and genuine drugs", were prepared when he was at the mill referred to:—

Powdered Cape Aloes—Cape aloes, dried, 100 lbs.; ship biscuit, 100 lbs.; curcuma, q. s. to color.

Common Ginger—African ginger, 200 lbs.; capsicum hulls, 25 lbs.; biscuit, 1000 lbs.; curcuma, q. s. to color.

Ipecac. (powdered)—Ipecac., 100 lbs.; ship biscuit, 25 to 40 lbs.

Opium (powdered)—Turkey opium, 50 lbs.; Egyptian opium, 25 lbs.; biscuit, 40 lbs.

Your committee have noticed, in making a number of examinations of arti-

cles furnished by manufacturers, as ascetic, nitric, muriatic acid, aqua ammonia, oxide of zinc, sub-carbonate of iron, and others, that but little attention is paid to the requirements of the Pharmacopœia, as every pharmacist can ascertain with but little trouble.

We think it important, and would suggest to this association the propriety of calling special attention to this point, that while we have a standard our manufacturers should furnish articles that can be depended upon for purity and for official strength.

In conclusion, your committee express the hope that the effort made by them to awaken more of an interest in the subject of adulterations may meet with favorable support from the association.

We feel that we have barely touched upon the subject—very many instances of fraud and deception are not alluded to—but what we have said and done we trust may be for the benefit of the public and of our profession at large. We cannot take leave of the subject, however, without expressing the satisfaction we feel as we refer to very many members of our profession who strive to raise the standard of their business by discountenancing, in every way in their power, all fraud and deception.

The stigma of adulteration does not belong to the drug trade alone; in fact, very many articles of food are systematically and almost always adulterated, so that to obtain them in their absolute purity is almost the exception. Of such are the ground spices, coffee, &c.

We are aware this is a strong assertion, but proof can be produced, were it necessary.

One article referred to, that of ground coffee, we can give the formula by which it is made.

This coffee, put up in one-pound papers, and labelled "fine old Java," is made as follows:—For every one hundred pounds there are sixty pounds of peas, twenty pounds of chickory, and twenty pounds of coffee.

This compound sells for 12½c. per pound, and any person can judge of the value of it as coffee, containing as it does but twenty per cent. of that substance.

There are many upright and honorable men, however, who discountenance any such imposition upon the public, in all branches of trade; and we feel a proud satisfaction in referring to them, whether members of our profession or not. In *our own ranks* we know there are many upon whom the public can rely; and, in closing, we can only urge upon this association, once more, the importance of this subject, earnestly soliciting the hearty co-operation of every member to raise the standard of our profession, and as far as possible to discourage and expose fraud and deception.

Subsequently, Prof. Charles T. Jackson, who had listened to the reading of the report, made some remarks about adulterations that had come within his knowledge. In Boston and vicinity corn meal and bran are used in adulteration, instead of ship-bread, as in New York, and bran is substituted for red lead in the manufacture of red pepper. Corn meal is used in mustard to the

extent of from thirty to fifty per cent. The cream of tartar used in making bread is made up, in part, of ground rice and alum. Gum tragacanth enters into the composition of opium, and spices and blistering flies are ground in the same mill. At the request of Mr. Brewer, of Boston, he also explained his method of ascertaining when leather was colored by Nicaragua wood instead of cochineal.

Remarks upon this subject were made by several other gentlemen.

Mr. Hollis, of Boston, said corn meal was used in ground cinnamon, and soda ash was sold for saleratus.

Mr. Dix, of New York, said that it was within his knowledge that one firm in that city used annually 100 tons of soda ash in manufacturing saleratus, and other establishments used smaller amounts.

Remarks were also made by several gentlemen upon the importation of impure scammony, from Smyrna, and the discussion was kept up till the convention took a recess, at six o'clock.

Employment of Veratria in Acute Diseases of the Chest.

M. Aran has called the attention of practitioners to the remarkable effects produced by the internal use of veratria in febrile diseases, and especially pneumonia. In the Sardinian Medical Gazette an article has appeared, in which Dr. Ghiglia, without any knowledge of M. Aran's researches, recommends the use of veratria in the same circumstances, except that he never employs this alkaloid alone, but associates it almost always with opium, sometimes in the form of pill, sometimes as a syrup. The dose of veratria is five millegrammes (.077 of a Troy grain) in a pill, with the same quantity of opium, and the number of pills to be taken in the twenty-four hours varies from six to seven, and even twelve, according to the circumstances. In this dose, according to M. Ghiglia, vomiting rarely occurs, but nausea and the other depressing effects of veratria are present. The results obtained by M. Ghiglia in certain cases of pneumonia, bronchitis, and broncho-pneumonia have been sometimes most remarkable, and the following are the results arrived at by this author:—"1. The inflammation of the respiratory organs, when they have arrived at such a period as to produce disorganization of the parts, are not improved by the use of veratria. 2. The action of this substance is the more favorable in proportion as the disease is more recent. 3. The tolerance is very various, according to individual habits, and perhaps also according to certain peculiarities which are not well understood. 4. The more easily the tolerance ceases the more marked is the depression. 5. Veratria is, in many respects, a preferable medicine to others which are more constant in their action but less easy to take. And 6. It is perhaps prudent, in severe inflammations of the respiratory organs, to order a few bleedings before prescribing the veratria.—*Bulletin Général de Thérapéutique*, January 30, 1859.

Easy and Certain Cure of Facial Neuralgia.*By Dr. Burdach, of Luckau.*

Dr. Burdach recommends corrosive sublimate as a specific, never-failing remedy, in cases of facial neuralgia. He has used it for more than thirty years, and always obtained a prompt and certain cure, no matter how severe a form the disease had assumed. The formula he employs is the same which he recommended in Hufeland's Journal for 1826 and 1830, in the treatment of rheumatic gout. It is the following:—

R.—Liquor. Hydrarg. Bichlorid. corrosiv. (Pharmac. Borus.) $\frac{3}{4}$ jss.;
Vini Semin. Colchici, $\frac{3}{4}$ ss.—M.

S. Thirty to sixty drops every two hours.

Cases requiring the latter dose were extremely rare. (The Liq. Hydrarg. Bichlorid. corros. of the Prussian Pharmacopœia contains corrosive sublimate and hydrochlorate of ammonia, one grain of each to the ounce of water.) Each dose of the medicine should be followed by a draught of the species ad decoctum lignorum, (the species ad decoct. lignor. consists of guaiacum-wood, two parts; lappa and saponaria, one part of each; liquorice-root and sassafras, half a part of each. One ounce of this mixture is used to a pint of water.) There is about one-thirtieth to one-fifteenth of a grain of sublimate given in each dose, a quantity which is generally well borne by the patients. In order to assist the cure, Dr. Burdach sometimes ordered the local application of veratria ointment, but in the generality of cases it could be dispensed with, as the sublimate acted promptly without it. In very sensitive patients, acetic acid, chloroform, or tincture of opium, might be added to the given formula; such an addition, however, is not to be recommended.

To obtain prompt action of the remedy, it is absolutely necessary to give it in fluid form, and at the intervals prescribed above, for in the form of pills it seems to exercise but little control over the disease.—*Medizinische Cent. Zeitung*, and *North Amer. Med. Chir. Review*.

Employment of Tannin in Large Doses in Albuminous Anasarca.*By Dr. P. Garnier.*

Although the internal use of tannic acid is still very limited in France, its employment in large doses has been much recommended lately in other countries, and has been extended to numerous cases which, while proving its innocuous character, appear to exhibit it as possessing some totally new properties. It has been shown to be useful in all cases where it is required to arrest hemorrhages, to give tone to organism, or to remedy morbid secretions. It has been employed, for example with great benefit, in albuminuria, diabetes, and serous infiltrations.

From these considerations, Dr. Garnier has been induced to employ tannic

acid in the albuminous anasarca consecutive to scarlatina; and he adduces several cases illustrative of this mode of treatment, drawn from his own experience and cases recorded by other physicians. The cases all prove that in the general serous infiltration of the tissues complicated with albuminous urine there is a rapid and simultaneous disappearance of these two morbid phenomena under the influence of tannin alone, administered in a large dose. The conclusions drawn by Dr. Garnier are, that tannin, employed in doses of two to four grains a day (3ss. to 3j.) cures anasarca or œdema developed passively and occurring simultaneously with albuminous urine; that its curative action is manifested by abundant urine, gradually resuming its physiological characters, by perspiration, easy alvine evacuations, return of appetite, &c.: that these signs appear from the second day of the administration of the tannin; that, given in solution in doses of twenty to fifty centigrammes at a time, tannin causes no unfavorable symptoms affecting the digestive passages; and lastly, that the action of tannin appears to be exerted primarily upon the fluids of the economy, the albuminous principles of which it coagulates and renders plastic, and that its conservative action on the solids appears to be tonic and astringent.—*Archives Générales de Médecine, January, 1859.*

New Disinfecting Composition.

M. Velpeau has recently communicated to the Academy of Sciences a paper from Drs. Demeaux and Corne, describing a disinfecting composition, which is said to be of great efficacy. It is introduced, with the *bravura* of scientific trumpeting, which is peculiar, on the other side of the Channel, to medical practitioners, who have furnished up an old notion, or had the good luck to hit upon a novel expedient, of which the eccentricity is but too often the chief merit, and which is but only emulated here by the lessees of operatic or dramatic enterprise. We trust that the lofty claims which have been put forth may in some degree be realized on this occasion. This discovery, which is described as being of the "highest importance in surgery," and as entitling its inventors "to rank high amongst the benefactors of mankind," &c., consists in the application of a compound which "absorbs pus, and destroys its fetid smell," dispensing also with the necessity of employing lint. The prescription is as follows:—Take one hundred parts of plaster of Paris, finely powdered: of coal tar, from one to three parts, and mix in a mortar; add a sufficient quantity of olive oil to reduce the mixture to the consistence of ointment, and preserve for use in a close vessel. This mixture is of a dark brown color, and has a bituminous smell. The oil binds the powder without dissolving it, so that the compound retains its absorbing quality when placed in contact with a suppurating sore; and it never dries sufficiently to become inconvenient to the patient by its hardness, nor can it do any injury to the sore. The application may be immediate or mediate, according to circumstances. If applied immediately to the sore it causes no pain, and has a destructive action favorable to cicatrization. The advantages which it offers are sum-

med up as follows:—1. A gangrenous wound, emitting fetid and abundant pus, is at once deprived of its bad smell. 2. After a twenty-four or thirty-six hours' application the bandages of a bad sore exhale no more smell than if they had been applied to a common fracture. 3. A cancerous ulcer is immediately deprived of its fetor. 4. The same is the case with ulcers of the legs. 5. Bandages and poultices charged with offensive pus are at once disinfected when brought into contact with the compound above described. 6. It also stops decomposition, keeps away insects, and prevents the generation of worms.

Drs. Chevreuil, Velpeau, and Cloquet have been appointed by the Academy to report on this composition.—*London Lancet*, Aug. 6.

On the Effect of Long-Continued Doses of Iodine.

By M. Rilliet.

M. Rilliet, of Geneva, relates some cases to the Paris Académie in proof that iodine, although administered in small doses, if continued for too long a period may gradually induce symptoms, the origin of which may not always be obvious. He concludes:—1. The prolonged absorption of an iodized salt, whether contained in water, the air, or in food, is not always without danger. 2. The inhabitants of some localities are more exposed to this influence than others; and such susceptibility may be due to the minute quantity of iodine contained in the air, water, or food, employed in such localities. 3. This iodic intoxication is perhaps more to be feared when the medicine is given in small than in large quantities, as a preventive rather than as a curative agent in a localized and confirmed diathesis. 4. It is a very exceptional occurrence in childhood, rare in adult age, and more to be feared as the subjects advance in life; therefore the administration of iodine to persons older than forty must be especially watched, and it must be suspended on the appearance of the first symptoms of saturation, as bulimia, emaciation, palpitation of the heart, or nervous susceptibility. 5. The best remedies in this kind of slow poisoning are milk, restoratives, change of air, and iron.—*Bulletin de l'Académie.*

Poisonous Effects of Belladonna Used Externally.

A lady, aged about forty-three, suffering from severe pain in the hypogastric region, was ordered to apply the following liniment twice a day:—Camphorated oil of henbane, thirty, and extract of belladonna, four parts. Forty-eight hours after commencing its use she was seized with delirium. The pupils became dilated, and there were irregular movements, lipothymia, redness of the face, and a fixed stare. Sinapisms were applied to the feet, acidulated drinks were administered, and a bleeding was to be performed, when abundant menses and discharge came on, as before, the proper quantity of the medicine. The symptoms of poisoning gradually disappeared.

Uva Ursi a Substitute for Ergot of Rye.

It has for some time been known that the fœtus may suffer from the administration of ergot to the mother; and M. St. Claire Deville has recently brought forward statistics which would tend to show that the fears entertained on the subject are not exaggerated. (Vide the *Lancet*, vol. i., 1859, p. 626.) Struck by these facts, M. Gauchet (*Bulletin de Thérapéutique*, June 15th, 1859,) gave the *uva ursi* a trial in a case of lingering labor.

The patient was forty years of age, and pregnant for the fourth time. After ten hours of great suffering, little progress had been made, though the os uteri was soft and tolerably dilated. Half an ounce of *uva ursi* leaves were now infused in a quart of water, for an hour, and a teacupful of this infusion was taken every half hour. After the first three doses, the contractions, which had almost entirely ceased, became vigorous, and the patient was delivered of a living child three hours after taking the first cup.

Poisoning by Cyanide of Potassium.

At a late meeting of the New York Pathological Society, Dr. Finnell presented a specimen of a stomach removed from a patient who was poisoned by cyanide of potassium. The patient was a daguerrian artist. He swallowed a piece of salt as large as the end of the finger. Immediately he cried for water, but before he could get his mouth to the pipe of the hydrant he died. Death took place in from three to five minutes after he swallowed the poison.

In answer to a question from Dr. Clark, he stated that the symptoms of poisoning by this salt were very like those from poisoning by prussic acid. The death was very rapid. This was the third case he had met with. This man lived but three minutes, another lived twelve minutes, and a third he was not certain how long he survived; it was a very short time, however. In each of the cases the stomach was intensely reddened.

Dr. Dalton thought it was important to know that injection of the stomach took place in so short a time as three minutes, unless most of the change was post-mortem.—*Nashville Monthly Record*.

Saline Injections in Diphtheritis.

M. Roche states that he has been so successful in some cases in which he has tried the injection of a solution of chloride of sodium into the throat, that in his next case he is disposed to employ it as the sole means of treatment. He practises, in fact, a continuous, or almost continuous, irrigation of the throat, by means of Eguisier's irrigator, provided with a canula having a very small jet. He believes that it is in such irrigations, whether employing salt, alum, or the chlorates, we should seek for curative agents.—*Union Médicale*.

Pharmacy.

LEMONADE OF IRON.

Take twenty parts of bitartrate of potash, eight parts of hydrated sesquioxide of iron, one part of pure iodine. Make a tartrate of potash and iron by the ordinary process. Dissolve afterwards three grammes ($46\frac{1}{4}$ grs.) of this new salt and sixty grammes (two ounces) of hot distilled water, filter, put the solution in a quart bottle, and add gaseous water.

Usually the preparations of iron are given in a solid state, and in cases of weak and exhausted stomachs are not well received. The lemonade of iron has emmenagogue properties in the highest degree. Succeeds well in phthisis chlorosis, amenorrhœa, &c.—*Répertoire de Pharmacie*.

PREPARATION FOR BLENNORRHAGIA.

The *Journal de Médecine et de Chirurgie Pratique* publishes the following formula, by Dr. Clerc:—

R. Cubebs,	60 grammes.
Copaiba,	20 “
Catechu,	5 “
Conserve roses,	q. s.

The patient should take, twice a day, a piece of the compound, of the size of a walnut. Sometimes Dr. Clerc directs it to be divided into eighty parts, giving from four to six at intervals during the day.

SYRUP OF IODIDE OF POTASSIUM IN SYPHILIS.

M. Basin gives iodide of potassium in this disease, in doses of five to seven and a half grains, till seventy-seven grains are given. Seldom had occasion to give more. He prefers the following formula:—

R. Bi-iodide of mercury,	3 grains.
Iodide of potassium,	$2\frac{1}{2}$ drachms.
Syrup of saponaria,	18 ounces.

Dose—Begin with two teaspoonsful, twice a day, and increase until four teaspoonsful are taken at a time.

IODIZED LIQUID FOR DISINFECTING WOUNDS AND ULCERATIONS OF A BAD NATURE.

By *Marechal (De Calvo)*, M. D.

R. Iodine,	$15\frac{1}{2}$ grains.
Iodide of potassium,	31 “
Distilled water,	3 pints.

Apply compresses soaked in this liquid to the wounds, changing them several times a day, or, without changing the compresses, keep them saturated with the iodized solution.—*Répertoire de Pharmacie*.

SOLUTION FOR INJECTIONS FOR INFLAMMATION OF THE URETHRA.

R. Liquid chloride of zinc,	24 to 36 drops.
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Distilled water,..... 3 ounces.

Agitate and filter.

Apply two or three injections a day. Each injection to be made with a small syringe, with very little of the liquid.—*Répertoire de Pharmacie.*

JELLY AND LOTION OF GLYCERINE, FOR CUTS, EXCORIATIONS, FISSURES OF THE NIPPLE, LIPS AND HANDS.

Jelly of Glycerine.

℞. Gum tragacanth,..... $\frac{1}{2}$ ounce.
Lime water,..... 4 “
Glycerine,..... 1 “
Rose water,..... $3\frac{1}{2}$ “

Make into a soft jelly, convenient to be used as an embrocation.

Lotion of Glycerine.

℞. Biborate of soda,..... 3 to 6 grains.
Glycerine,..... 1 ounce.
Water,..... 4 “

[*Répertoire de Pharmacie.*]

NEW PROCESS FOR THE PREPARATION OF LEMONADE WITH CITRATE OF MAGNESIA.

The preparation of the lemonade with citrate of magnesia has become so popular that there is no little curiosity prevalent for the *modus operandi* of a preparation so agreeable, and which keeps for several months.

In a report made to the Société de Pharmacie we find mentioned a process which has for its object the supplying of this great desideratum. The formulæ given are for lemonade of different degrees, the weight of articles used being expressed in full numbers, so as to form the citrate of magnesia, with twelve equivalents of water:—

1. Lemonade of thirty grammes—
Citric acid,..... 11 grammes.
White magnesia,..... 12 “
2. Lemonade of forty grammes—
Citric acid,..... 17 grammes.
White magnesia,..... 16 “
3. Lemonade of forty-five grammes—
Citric acid,..... 20 grammes.
White magnesia,..... 18 “
4. Lemonade of fifty grammes—
Citric acid,..... 24 grammes.
White magnesia,..... 21 “
5. Lemonade of sixty grammes—
Citric acid,..... 28 grammes.
White magnesia,..... 24 “

Pillate the carbonic citrate of magnesia in a mortar, with two hundred and fifty or five hundred grammes of water, according to the quantity it is desired to

make; the mixture is then introduced into a bottle of very strong glass, the acid then added in crystals, and the bottles carefully and tightly corked. After six, eight, or ten hours, according to the strength of the lemonade and the quantity of carbonate of magnesia used, all the carbonate will have disappeared. The bottles should be kept cool, in a cellar, taking the precaution to see that the bottles are kept well corked, so that they will retain all the gas; if allowed to escape, insoluble carbonate of magnesia will be formed. To prepare the *lemonade*, uncork a bottle, pour the very gaseous solution upon a filter, and receive the liquid in another bottle containing eight grammes of citric acid and fifty grammes of syrup of any kind. The syrup preserves the crystals of acid from the action of the liquid, and the solution of citrate and bi-carbonate of magnesia is readily filtered, without decomposition of the last salt. Fill the bottle with ordinary water, and cork well. Upon shaking the bottle the syrup is dissolved; the citric acid decomposes the bi-carbonate of magnesia, and forms citrate of magnesia and carbonic acid, which remains in solution. Lemonade made by this process will keep two or three months without becoming turbid.—*Abeille Médicale*.

ADULTERATION OF VALERIANATE OF IRON.

The valerianates are often adulterated, the adulteration consisting of the mixture of some salt with a certain quantity of essential oil of valerian. M. Monnerat has given some easy methods of detecting these adulterations. He found the false valerianate had a deeper color than the true, and that it was insoluble in alcohol and ether, and that when treated with boiling water it gave, after cooling, a deposit of subcarbonate of iron, and a considerable quantity of essential oil of valerian floating upon the surface of the liquid. Besides, the true valerianate of iron is insoluble in water, but, on the contrary, is entirely soluble in alcohol. Another character of the true valerianate is its acid, disagreeable, persistent smell, which is very different from the penetrating odor of valerian presented by the false valerianates formed by the addition of the essential oil of the plant.—*The Druggist, June, 1859*.

ELIXIR OF CITRO-LACTATE OF IRON.

M. Robineaud gives the following recipe, in the *Journal de Pharmacie*, for this preparation:—

B. Citrate of protoxide of iron,.....	½	drachm.
Lactate of protoxide of iron,.....	½	"
Distilled water,.....	19	fluid drachms.
Alcohol (eighty per cent.),.....	14	"
Simple syrup,.....	20	"
Tincture of lemon peel,.....	½	fluid drachm.
Tincture of cinnamon,.....	½	"
Tincture of cloves,.....	6	drops.
Caramel,.....	q. s.	

Put the lactate of iron, in powder, in a capsule, with the distilled water; heat gently till dissolved; add the proto-citrate of iron, which dissolves

promptly; filter the solution into a bottle containing previously the syrup and alcohol, and lastly, add the tinctures and caramel.

BITTER WINE OF IRON.

By Wm. S. Thompson.

Having been requested by a medical friend to make the preparation above named, to contain one grain of Wetherill's precipitated extract of bark and two grains of citrate of iron in a teaspoonful of sherry wine, I devised the following formula, after several experiments:—

℞. Solution of persulphate of iron (containing 60 grains of dry oxide to the fluid ounce),	17½ fluid drachms.
Citric acid,	6 drachms.
Sherry wine,	24 fluid ounces.
Water of ammonia,	q. s.
Wetherill's precipitated extract of bark,	224 grains.

Dissolve the precipitated extract of bark in the wine, and filter through paper. Dilute the solution of persulphate of iron with a sufficient quantity of water (about one quart), and add a sufficient quantity of water of ammonia, to precipitate the peroxide; wash the precipitate in the usual manner, drain it on a muslin filter, transfer the washed magma to a porcelain dish, and add the citric acid (previously reduced to a fine powder); then apply a gentle heat, stirring constantly until the oxide is dissolved, when add three and a half drachms of water of ammonia, taking care that the latter is not in excess. The bright green solution of ammonia-percitrate of iron obtained, should be reduced by gentle evaporation to four fluid ounces, and then poured into the twenty-four fluid ounces of vinous solution of precipitated extract of bark, above described.

Our medical friends prefer, in some cases, the above preparation of half the given strength, which is prepared by using wine enough to make the whole measure fifty-six instead of twenty-eight fluid ounces. The flavor of the wine may be improved by the addition of a small quantity of strong tincture of orange peel, or a few drops of fresh oil of orange.—*Journal Trans. Md. Col. Pharm.*, June, 1859.

SYRUP OF PROTO-CARBONATE OF IRON.

In place of all the complicated recipes furnished for syrups of unchangeable protoxide, *et id genus omne*, we give the following as a simple and excellent preparation:—

℞. Sodæ bicarbonatis (crystalized, if to be had),	1 drachm.
Ferri proto-sulphatis (crystalized),	1½ drachms.
Powder coarsely and shake up, without application of heat, with	
Syrup simplicis,	6 ounces.

One ounce of the syrup contains six grains of the proto-carbonate of iron.

E d i t o r i a l .

ADULTERATION OF MEDICINE.—We publish, this month, the conclusion of the interesting report upon adulterations, made before the Convention of Apothecaries, at Boston, in September. The Society have very wisely continued the Committee another year, with Mr. C. T. Carney at its head; and it is hoped this subject will be pursued, and Committees continued, who will push their investigations until the public shall have been thoroughly enlightened concerning the frauds going on around us.

It has been urged that the publication of the processes employed in adulteration only give information whereby it will become general. The reply to this is, clearly, that the knowledge given to the public will put them on an equal footing with the adulterator, and, knowing his *modus operandi*, will detect his frauds as readily as he perpetrates them, and will consequently avoid him. It is not to be supposed that knowing the process will act as a temptation to a skillful physician to use such remedies in his practice. This Association, knowing the existence of these frauds, are in duty bound to investigate and expose them: to conceal them or decline to investigate them, shutting its eyes to what is daily met with in every commercial place, would almost constitute a connivance, and make it accessory after the fact, and deprive it of the confidence and support of all respectable apothecaries. There is but one course to be pursued—that is, trace out fraud and expose it.

Adulterations, properly defined, consists in the intentional addition of any article for the purpose of cheapening its production or its cost—any substance, the presence of which is concealed, or, in other words, is not acknowledged or stated at the time of the sale, or implied in the name under which it is sold.

One would suppose that the great object of adulteration—gain by deception—would be defeated by intimating upon the label the absence of purity, as No. 1, No. 2, No. 3, &c. The public are not allowed, in these cases, to know the actual proportion of pure and impure articles: they draw a kind of inference from the price, but this inference is a very erroneous one. Although the price is less, and they infer that they are only paying a proportionate price, they often pay fifty per cent. more than if they purchased the pure article. This apparent honesty is but a fraud, and it will be found that each are as much below the arbitrary standard assumed, or what they ought to be, as the secret adulteration is below the pure standard. Were it otherwise, the object of reducing the standard would be defeated, and no money would be made by the operation. Indeed, the liability of detection in the case of the second quality is much less than in the pure, and we have often remarked that parties were more successful in this system of operation, by having all grades of purity for the accommodation of the public.

We make the suggestion, that this Committee may procure an assortment of grades, as put forth by many houses, and let the public know the per centage of dilution which forms the standard, and make a comparison of price and quality.

It should be rigidly insisted that when grades of articles are established that the proportion of each should be stated upon the package.

It often occurs that an admixture of some substance is necessary with a preparation, to make it convenient for dispensing, or to preserve it. In such instance the kind and proportion of admixture should be stated, that the dose can be estimated accurately.

CONIUM IN GONORRHOEA.—We have several letters making inquiries concerning the use of this article in the above disease. It has been tried by Dr. Statts, of Albany, effectually, in doses of two to four grains, depending upon the character of the complaint. Dr. Dodd, of the United States Navy, says Dr. Eberle "has used extract of conium with great success; generally removed the disease in three or four days, but, under unfavorable circumstances, the cure cannot be effected under eight or ten days. He employs extract of conium, one drachm; opium, ten grains—made into ten pills, two of which are to be taken every two hours, until *vertigo and a disagreeable fullness of the head is experienced*. His object is to put the system under the narcotic influence of conium, and sustain the influence until the discharge ceases, which seldom requires more than two or three days."

THE DENTAL COSMOS.—We are pleased to place among our exchanges this valuable and interesting journal. Although devoted to dental science and dental literature, and to the interests of the dental profession, it contains much matter valuable to the medical profession. It takes the place of the Dental News-Letter, and is issued monthly, by Drs. White, McQuillen and Zeigler, at No. 528 Arch street, Philadelphia.

THE PHYSICIAN'S HAND-BOOK OF PRACTICE for 1860, by Drs. Elmer and Elsberg, is before us. We are happy to notice many additions to the text since the issue for 1859.

In this work the physician has, in addition to the common memorandum-book of convenient size for the pocket, over a hundred pages of closely printed matter, intended as *suggestive* and for immediate reference, in the absence of the standard medical works, from which the synopsis is made; among which we find a classification of diseases, with their leading symptoms and usual remedies; Dr. Hall's ready method in asphyxia; medicinal weights and measures; list of remedial agents; medicated baths; writing prescriptions; poisons and their antidotes; diagnostic examination of urine, &c., &c.; followed by blanks for recording the symptoms of patients and their treatment, for obstetric records, for daily entries of visits made, and for general memoranda.

We recommend the "Hand-Book" to every physician, and more especially to those practising in the country.

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It is in the form of a powder, carefully put up in bottles, to keep in any climate, and merely requires water poured upon it to produce a delightful effervescent beverage.

Taken in the morning, it never interferes with the avocations of the day, acting gently on the system, restoring the digestive powers, exciting a healthy and vigorous tone of the stomach, and creating an elasticity of mind and flow of spirits which give zest to every enjoyment. It also enables the invalid to enjoy many luxuries with impunity, from which he must otherwise be debarred, and without which life is irksome and distressing.

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principles. To persons following the sea, or going long voyages, this preparation possesses qualities far surpassing any other—neat and portable in form, speedy and efficacious in its operation, successful both in the earliest and worst stages of the severest disease, while the usual nauseous taste and unpleasant odor of Copaiba are wholly avoided in this preparation.

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Remarks on *Uva Ursi*, *Gaultheria Procumbens*, *Andromeda Arborea*, *Ledum Palustre*, *Comptonia Asplenifolia*, *Statice Caroliniana*, *Nymphæa Odorata*, *Nuphar Lutea*, *Alnus Rubra*, *Trillium Pendulum*, *Erigeron Annuum*, and *Spirea Tomentosa*.

BY CHARLES A. LEE, M. D.

NUMBER XII.

ARCTOSTAPHYLOS UVA URSI, (*the Bear-Berry*, &c.)—A well-known perennial shrub, common to the northern parts of Europe, Asia and America, and found in dry, stony and barren spots. The leaves only official, which are to be gathered in autumn. They are inodorous, slightly bitter and astringent to the taste, leaving a sweetish sensation in the mouth. The virtues are extracted by diluted alcohol.

Chemical Composition.—One hundred parts yield: tannin, 36.4; gallic acid, 1.2; resin, 4.4; oxidized extractive, 6.8; supermalates of lime and soda, 3.3; chlorophylle, 6.3; gum, 15.7; extractive, 17.6; lignin, 9.6; water, 6.* Tannin is evidently the chief active constituent, constituting more than thirty per cent., a larger amount than is furnished by any of our indigenous astringents.

Therapeutical Properties and Uses.—The *uva ursi* may be advantageously employed for all purposes for which vegetable as-

* Mr. Hughes has discovered a peculiar crystallizable principle in the *uva ursi*, called by him *urson*, which he found to be diuretic, in doses of one grain.—*American Journal of Pharmacy* xix, 90.

tringents are generally prescribed. The urine assumes a dark color under its use, from the conversion, by oxidation, of the tannic into gallic and pyro-gallic acid in its passage through the system; while it increases the quantity of urine, its quality is also modified, the lithic deposits being much diminished. It has, moreover, the power, to a considerable extent, of lessening the sensibility of the mucous membrane of the bladder and pelvis of the kidneys, so that in cases of cystic and ural calculi the sufferings of the patient are greatly alleviated. We are inclined to believe that all astringent remedies possess this power, to a certain degree. In cases of chronic cystitis, or vesical irritation, with increased secretion from the mucous membrane, the persevering use of the *uva ursi* will very frequently be attended with decided efficacy in diminishing or completely suppressing the muco-purulent deposition in the urine. By diminishing the quantity of lithates, it thus lessens the acrimony of the urine, independent of any specific power over the mucous surfaces. In this way the pain and frequent desire to pass urine are much relieved. It is no less efficacious in catarrh of the bladder, where there exists a secretion of granular mucus mixed with phosphates. The curative results are doubtless partly due to its influence over the digestive organs. In some instances it has to be continued several days before any decided effects will be perceived from its use. It well deserves a trial in chronic dysuria, so often met with in the aged, as well as chronic bronchial affections, with profuse mucous or purulent secretion. It is a good tonic alterative in most cases of chronic inflammation of mucous surfaces.

Preparations.—Decoction, fluid extract, solid extract, tincture, syrup, infusion.—The decoction is made by boiling an ounce of the leaves in a pint and a quarter of water to a pint, of which one or two fluid ounces may be given two or three times a day. The fluid extract is now getting into general use; dose, half to one drachm. The dose of the solid extract is from five to fifteen grains; of the tincture, made with two ounces of the fluid extract to one pint diluted alcohol, from three to six drachms may be given. One ounce of the fluid extract to one pint of water makes a good infusion, of which one to two ounces is a dose. To form a syrup, add four ounces fluid extract to one pint of syrup; dose, two to four drachms. *Hyoscyamus* is a good addition to

this remedy, also conium and lactucarium.

The *EPIGEA REPENS* (*Trailing Arbutus*) has the same medicinal virtues as the *uva ursi*, and may be substituted for it. It is a popular domestic remedy for gravel, and is put up and sold by the Shakers, under the name of the *gravel plant*.

GAULTHERIA PROCUMBENS, (*Partridge Berry*).—This well-known, small, shrubby, indigenous evergreen plant belongs also to the *ericaceæ*, or heath tribe. The leaves and whole plant possess aromatic properties similar to sweet birch, which reside in a volatile oil. The leaves contain much tannin, and are astringent, as well as a cordial stimulant—well adapted to cases of chronic diarrhoea; chiefly used to impart an agreeable flavor to other preparations. The oil or infusion may be employed: has considerable reputation as an emmenagogue, (U. S. P.) The oil is sold under the name of *oil of wintergreen*. The oil is recently ascertained, by M. Cahours, to be a *salicylate of the oxide of methyl*, and composed of an acid called the *salicylitic* (hitherto found only in the oil of spirea), united with the ether of wood-spirit (*methylic ether*).

ANDROMEDA ARBOREA, (*Sorrel Tree*).—More than twenty species of this genus are found in North America, all of which have more or less astringency. The leaves and wood of the present species abound in malic acid, combined with tannin, which adapts it well to many cases of disease. Rafinesque says they form a refreshing, cooling, anti-febrile drink, allaying thirst, &c.; useful where a refrigerant astringent is needed, and very similar to the fruit of the *rhus glabrum*.

Preparations.—The same as other astringents.

LEDUM PALUSTRE AND LATIFOLIUM, (*Labrador Tea*).—This small evergreen shrub is common to the Eastern Continent and to North America. The leaves have an aromatic, camphorous, bitter taste, and a balsamic odor, and abound in volatile oil and tannin, to which they owe their sensible and medicinal properties. The plant is tonic, astringent and slightly narcotic, and has been used successfully, both internally and externally, in some cutaneous diseases, as leprosy and scabies, also in whooping cough, diarrhoea, dysentery, &c. In Germany, the leaves are used in brewing, as a substitute for hops.

Chemical Composition.—Your analysis gives of—

Organic matters,	-	-	-	-	-	-	6650.08
Inorganic matters,	-	-	-	-	-	-	349.92
Total,	-	-	-	-	-	-	7000.00
Gum, -	-	-	-	-	-	-	303.20
Extract, -	-	-	-	-	-	-	71.30
Starch, -	-	-	-	-	-	-	20.80
Tannin, -	-	-	-	-	-	-	165.12
Particular principle, -	-	-	-	-	-	-	816.00
Sugar, -	-	-	-	-	-	-	160.00
Chlorophylle, -	-	-	-	-	-	-	768.00
Black resin, -	-	-	-	-	-	-	108.32
Soluble salts, -	-	-	-	-	-	-	282.02
Insoluble salts, -	-	-	-	-	-	-	67.90
Ligneous, -	-	-	-	-	-	-	4237.44
Total,	-	-	-	-	-	-	7000.00

Preparations.—The same as above.

COMPTONIA ASPLENIFOLIA, (*Sweet Fern*).—This well-known shrub, the only species of the genus, possesses medicinal properties which entitle it to a place in every work on the indigenous medical botany of our country. The bruised leaves emit a strong resinous, aromatic odor. The analysis you have recently made shows the presence of a large per centage of tannin, resin, and a peculiar sweet principle. The per centage of tannin exceeds that of either of the three varieties of oak examined by you, and equal to some of the strongest astringents examined. In the Eastern States, especially in Maine, it is employed extensively in tanning leather, for which purpose it is thought to be superior to any other astringent. As a domestic remedy it is in very general use, and much esteemed as a tonic alterative in scrofulous and cachectic affections, in the form of beer, also as a reliable remedy in dysentery, diarrhoea, hæmoptisis, the debility succeeding fevers, and to check night sweats. Formerly, it had some reputation for the cure of tape-worm. It may be safely pronounced a mild astringent tonic, possessing considerable alterative properties, which adapt it well to cases where such remedies are indicated. We have known good effects from a mild decoction of it, sweetened, in the summer complaint of young children. In Pennsylvania, it is a popular remedy, in cases of dysentery, among the German population; also as a wash or fomentation in rheuma-

tism, contusions, and poisoning by sumac. A strong fluid extract of this plant is a desideratum.

Chemical Composition.—Your analysis gives, of—

Organic matters, - - - - -	93.600
Inorganic matters, - - - - -	6.400
<hr/>	
Total, - - - - -	100.000
Gum and albumen, - - - - -	3.669
Tannin, soluble in alcohol and water, - - - - -	0.968
Tannin, - - - - -	4.857
Sweet principle, - - - - -	11.517
Sugar, - - - - -	1.230
Extractive matter, - - - - -	1.309
Starch, - - - - -	3.085
Chlorophylle, - - - - -	6.271
Resin, - - - - -	11.702
Soluble salts, - - - - -	0.847
Insoluble salts, - - - - -	5.553
Ligneous, &c., - - - - -	48.992
<hr/>	
Total, - - - - -	100.000

STATICE CAROLINIANA, (*Marsh Rosemary*.)—The marsh rosemary is almost the only astringent vegetable, employed in medicine, belonging to the class of maritime plants. That agent, common salt, which proves poisonous to most vegetables, is the proper nutriment and stimulus of others, which perish when removed from their native marshes. The *statice* is exclusively a marine plant, and well known from its purple flowers appearing among the grass, during the summer months, in our salt meadows, and belongs to the natural order of Plumbaginaceæ, or lead-worts. The root is the officinal part. It contains twelve per cent. of tannin, and is one of our most powerful indigenous astringents. Bigelow declares it "one of the most intense and powerful in the vegetable materia medica." He also detected in it gallic acid. Its active principles seem wholly soluble in water; hence it contains little or no resin or volatile oil. Prof. V. Mott made this the subject of his inaugural thesis in 1806. He states that the astringency, indicated by the sulphate of iron, is greater in the tincture than in the infusion, under experiments precisely similar; from which it might be inferred that alcohol is a better solvent for this root than water. He found the cold infusion more powerful

than the hot, which may have been owing to the escape of a part of the gallic acid by evaporation. The astringency was found fully equal to that of galls, and ink, made from equal quantities of the two, similarly treated, was equal in blackness.

The therapeutical uses of the marsh rosemary are those of the more powerful class of astringents. Dr. Mott praises it very highly in dysentery, after the acute stage is passed, and says:—"It has restored patients to health, after various tonics and astringents had been used to no effect."—(*Inaug. Dissert.*) In Massachusetts, and other New England States, it has long enjoyed a high reputation in cases of cynanche maligna, or putrid sore-throat, used locally as a gargle, and also internally. It is almost universally kept in the country drug stores, and, according to Bigelow, larger quantities sold than of any other indigenous article. In popular practice it is chiefly employed in aphthous ulcerative affections of the mouth and fauces. It was regarded as a useful astringent in the time of Pliny. It has emetic and sudorific properties.

A strong decoction or cold infusion of the root is the only preparation in present use, though a fluid extract, tincture and syrup may easily be prepared, and in some cases may be preferable.

NYPHÆA ODORATA, (*Sweet-Scented Water Lily*).—This beautiful plant was well known to the ancients, and is described by Galen, Dioscorides, and the Arabian authors, Rhazes, Serapion, Avicenna, &c. The Greek and Latin authorities describe it as possessed of desiccative powers, without pungency: constipating the bowels, and useful in female flux, &c. The Arabians administered the syrup for coughs and pleurisy, and state that it induces sleep and cures vertigo, but is debilitating. The Oriental nations use it still for medicinal purposes.

Most of the tribe to which this plant belongs are natives of the torrid zone, and this, as well as the *nuphar lutea* (*yellow pond lily*), only support the cold of our latitude by the depth of water in which they vegetate, the roots being placed at such a depth that the frost never reaches them. The roots of the *nymphæa* are rough, knotted, and as large as a man's arm, while the porous stalks are buoyed up by the large quantity of air contained in the cellular tissue. The upper surfaces of the leaves are highly

polished, and repel the water, as if coated with varnish or oil. The flowers, which have a peculiarly fragrant odor, expand in the morning as soon as they feel the warmth of the sun, and float upon the water, owing to the concavity of the calyx and petals. The flowers close at night, and often sink beneath the surface till the next morning. As the flower decays, the germ, or seed, sinks to the bottom, and there ripens its fruit. The roots of this plant are extremely styptic and bitter to the taste, and contain a large amount of tannin and gallic acid.* This is evident from the intensely black color which is struck by a solution of sulphate of iron, and the copious precipitate from the addition of gelatine. Alcohol throws down a flocculent substance resembling starch. The perfume yielded by the flowers is not surpassed even by that of the rose, but is only perfect when the flowers are fresh. It is very evanescent, and no method has yet been discovered by which, like that of the rose, it can be isolated and preserved. The stamens possess more of the odorous principle than the petals. The roots of this plant are kept in many of the shops, and used in domestic practice to form poultices. In the regular practice they are more often prescribed in cases where saturnine applications and alum curds are employed. The European species, *nuphar alba*, which possesses similar qualities, has always been regarded as antiphrodisiac,† and extensively employed in dysentery and other morbid discharges. Our own species has long been employed as a popular remedy in bowel complaints, and as an astringent in gleet, fluor albus, &c. It has also been found a useful gargle in ulcerated sore-throat. This is one of the Thomsonian remedies, and used for purposes above mentioned. Whether it possesses any antiphrodisiac and narcotico-sedative properties, as

* M. Morin de Rennes, a French chemist, found the *nymphaea alba* to contain starch, tannin, gum, gallic acid, resin, a vegeto-animal matter, and certain vegetable acids and salts.—*Merat and De Lens*.

† Merat and De Lens state that the name alone of this genus ("*nenuphar*"—*nymphaea*.) suggests its sedative, calmative, and especially its antiphrodisiac, properties. The latter property was well known to the ancients, and may have been suggested, as these writers state, by its habitation in the water and the virgin whiteness of its flowers. The French poets and naturalists have lavished their highest encomiums upon this plant as an antidote to the sexual passion, &c. History informs us that the pious cenobites of the desert made frequent use of it, and that it was extensively used in religious cloisters, convents and seminaries, and that its sedative powers were esteemed so great that it was believed to have the power of causing impotence and sterility. Singers also employed it to preserve the voice, physicians recommended it for erotic wakefulness, &c.

claimed by the ancients and recent French writers, may well be doubted. All the species contain a large quantity of *secula*, which after repeated washings is employed for food. The *nuphar lotus* of Egypt not only furnished magnificent flowers, with which to crown the heads of their gods and kings, but also served as food for large numbers of the people, especially in times of scarcity. *Lotus eaters* still abound, not only in that country, but all over the East.

The NUPHAR LUTEA and ADVENA (*small-flowered yellow pond lily* and *common yellow pond lily*) possess similar properties with the *nymphæa*, and may be employed in the same cases. The *nuphar advena* is a popular astringent tonic, containing much tannin and starch, and used, when fresh, to form poultices. The roots of all the water lilies are edible, and, though acrid when raw, are bland and nutritious when cooked; the petioles and leaves are eaten for greens. The leaves form a good dressing for blisters, cooling and emollient, while the flowers have proved successful in dysuria.

The above remarks will also apply to the *nelumbium luteum* (*great yellow water lily*), found in our northern lakes, the rhizomes of which resemble those of the sweet potato, and by some are esteemed equally agreeable, farinaceous and wholesome. The Indians, as well as Tartars, make great use of them for purposes of food.

ALNUS RUBRA, OR SERRULATA, (*Common Alder: Tag Alder.*)—The common alder is a well-known shrub, growing in clumps, and forming thickets on the borders of ponds and rivers, and in swamps. Several other species are found in North America, all having similar properties. The leaves and bark have a bitter and astringent taste. The inner bark is emetic. Analysis shows that the plant abounds in tannin, bitter extractive, some gallic acid, &c. It has been, and still is, extensively employed in popular practice as an astringent alterative tonic in abdominal fluxes, the various hemorrhages, and as an external application to wounds and ulcers. The plant is used in tanning leather, and for dyeing brown, black and yellow, with different mordants. The late Dr. Williams, of Deerfield, was very partial to its use in hæmaturia. As an alterative, it has considerable reputation in scrofulous and cutaneous affections; as a tonic in some forms of dyspepsia, it has

also proved successful. Botanic physicians extol this article as a powerful alterative, and very valuable in the treatment of chronic rheumatism, erysipelas, gonorrhœa, gleet, syphilis, gravel, cystitis, &c. The *alnuin* is a dry, powdered extract, obtained by digesting the plant in diluted spirit. It is of yellowish-brown color, very bitter and slightly astringent taste, and recommended in doses of three grains three times a day; it is also advised in combination with *macrotyn*, *phytolacin*, *euonymim*, &c. In some cutaneous diseases of a chronic kind, as impetigo, herpes, &c., the alnuin produces very good effects. In syphilis and the various forms of scrofula it is also well worthy of trial. In some cases—perhaps a majority—the *fluid extract*, now kept in the shops, will prove the best form of administration: dose, one to two drachms; or the infusion may be used, made with $\frac{3}{4}$ ij. of the fluid extract to one pint of water. The dose, of course, to be regulated by the age and other circumstances of the case.

TRILLIUM PENDULUM, (*Birth Root: Wake Robin, &c.*)—This is but one of eight species of trillium growing in the Northern States. Few of our indigenous plants surpass them in elegance and beauty, and they are all endowed with active medicinal properties. The root of the *T. atropurpureum*, or purple species, is generally believed to be the most active.

The trillium has somewhat tuberous roots, having a faint, slightly terebinthinate odor like cedar, and a peculiar aromatic taste. When chewed they excite the salivary glands, and leave a sensation of heat in the throat and fauces. As the plant has not yet been analyzed its proximate principles are chiefly unknown. Tannin and bitter extractive, however, form two of its active ingredients, to which its medicinal effects are doubtless owing.

From all I have observed, or can gather from others, I am led to believe that the trillium is one of our most valuable tonico-astringent alteratives, and especially beneficial in most cases of passive, atonic hemorrhage, as menorrhagia, &c. Less astringent than many other plants already noticed, it is far more alterative and tonic; yet it has decided efficacy as an astringent where this indication is present. The late Dr. Williams used the powdered root in all kinds of active hemorrhages, in doses of one drachm to an adult, repeated according to the urgency of the symptoms.

Dr. Stone, of Greenfield, Mass., has made very extensive use of it in all forms of bleeding, especially from the womb and lungs, and, as he thinks, with great and decided benefit. In the various forms of scrofula and cutaneous disease he has also seen great advantage from its use. In popular practice the *birth-root* is used in parturition, and is believed to facilitate the birth of the child. Hence its name.

I found it employed extensively for this purpose among the Chippeway Indians, on Lake Superior, while sojourning among them in 1848. They also believed it a certain specific for the bite of the rattle-snake. It seemed to be their favorite remedy in all female complaints, especially those attended with discharges. Indeed, the evidence in its favor, in cases of vaginal and uterine leucorrhœa, is very strong and satisfactory: also in passive bronchorrhœa and hæmoptysis.

The preparations of this plant are: the decoction, fluid extract, tincture, syrup and *trillin*. The latter is the powdered hydro-alcoholic solid extract, and of course combines, like the fluid extract, all the active virtues of the plant. The dose of it is from three to eight grains. It is a good preparation, and coming into very general use in scientific practice as a tonic alterative. The trillium deserves a higher rank in our vegetable materia medica.

ERIGERON ANNUUM,* (*Flea-Bane, Sweet Scabious, &c.*)—This plant occupies a place in the secondary list of the U. S. P., under the name of *E. heterophyllum*. There are several species of the genus, identical in their medical properties, and employed indiscriminately. The whole plant is officinal, and to be gathered during the flowering season. From the experiments of the late Dr. De Puy, of New York, we learn that this plant contains tannin, volatile oil, bitter extractive, albumen, gum, &c. The oil is of a pale yellow color, fluid as water, acrid to the taste, and a strong lemon-like smell. The leaves are bitter and astringent to the taste.

Chemical Composition.—The recent analysis in your laboratory gives, of—

* The *E. Canadense*, or Canada flea-bane, is another species.

Organic matters,	-	-	-	-	-	6416.08
Inorganic matters,	-	-	-	-	-	588.02
						<hr/>
Total,	-	-	-	-	-	7000.00
Gum,	-	-	-	-	-	341.12
Extract,	-	-	-	-	-	262.40
Amidon,	-	-	-	-	-	23.68
Tannin,	-	-	-	-	-	148.04
Sugar,	-	-	-	-	-	145.92
Particular principles,	-	-	-	-	-	715.52
Oil,	-	-	-	-	-	161.12
Chlorophylle,	-	-	-	-	-	396.64
Soluble salts,	-	-	-	-	-	274.72
Insoluble salts,	-	-	-	-	-	368.48
Ligneous,	-	-	-	-	-	4221.76
						<hr/>
Total,	-	-	-	-	-	7000.00

This plant has tonic astringent powers, and has been successfully used in a variety of diseases, such as diarrhoea and dysentery, after the acute stage, and as a styptic in the various forms of hemorrhage, external and internal. The late Dr. Gilbert Smith employed it with great success in the New York Alms-House, in 1812, using the decoction and infusion of the plant. Dr. De Puy, who wrote a history of the plant, (*Trans. of Physico. Med. Soc. of New York*, 1817,) also derived great benefit from its use in similar cases, as well as dysuria, preferring the tincture and extract. Its diuretic virtues are well known, and it has long been a popular remedy in dropsical cases. An infusion of the flowers is a useful nervine and antispasmodic, and has been much employed in nervous and hysterical affections. The oil from this plant is supposed to exert almost a specific power as an astringent in hemorrhage; indeed, to be one of the most powerful styptics known. An infusion of the plant was a favorite remedy with the late Drs. Dewees and Physic in dysury, especially in children. Dr. Barton extols it for relieving painful micturition, attendant on nephritis. It has some emmenagogue properties, and, being used by the Indians for this purpose, is often called squaw-weed.

The preparations are: decoction, infusion, fluid extract, tincture, syrup, oil, &c. The oil is supposed to be most astringent. For diuretic purposes the infusion and fluid extract are

preferable.

SPIRÆA TOMENTOSA, (*Hardback*).—This beautiful shrub is common in low, moist grounds, in most parts of the United States. It was known to the Indians as an astringent before it was adopted into regular practice. The bark and leaves contain most of the active principles, though the U. S. P. declares the root to be officinal. It is kept in the shops, in the form of square, pressed packages. The leaves have a bitter astringent taste and a smell like black tea. They contain tannin, gallic acid, bitter extractive, gum, &c. It yields its medicinal principles to water.

The hardback is a very reliable tonic and astringent, and seldom disagrees with the stomach. It was much used by the late Prof. Tully as an astringent, and recommended highly in diarrhoea, dysentery, hemorrhage, &c. The solid extract is equal to catechu, and might, as Griffith thinks, replace it. Dose, five grains to one scruple. The fluid extract, now kept in the shops, is an excellent and reliable preparation, in doses of five to twenty drops. As a tonic in pure debility, the spiræa is one of our best indigenous articles.

SPIRÆA SALICIFOLIA, (*Queen of the Meadow*).—*Chemical Composition*.—Your recent analysis gives, of—

Organic matters, - - - - -	6416.08
Inorganic matters, - - - - -	583.02
Total, - - - - -	7000.00
Gum, - - - - -	370.56
Extract, - - - - -	334.56
Amidon, - - - - -	123.86
Sugar, - - - - -	143.52
Tannin, - - - - -	115.20
Bitter principle, - - - - -	466.88
Particular principle, - - - - -	627.86
Chlorophyle, - - - - -	466.56
Soluble salts, - - - - -	370.88
Insoluble salts, - - - - -	212.32
Lignin, - - - - -	3768.30
Total, - - - - -	7000.00

Medicinal properties and preparations the same as those of the hardback.

Therapeutical Properties of Veratrum Viride.

BY A. F. PATTEE, M. D.

THE indications which veratrum viride seems to be capable of fulfilling are numerous. As a sedative no other medicine is equal to it, reducing a pulse of one hundred and thirty beats to seventy, in from three to four hours.

The preparations most used at present are the fluid extract and tincture. I prefer the fluid extract, as prepared by Tilden & Co.

Pneumonia is the disease in which veratrum viride is particularly indicated. It seems to have more controlling power in this than any other disease, reducing the inflammation and favoring expectoration in a very few hours. In some instances vomiting is induced, which is generally tough, viscid mucous; the pulse now rapidly declines, if not affected before; the breathing becomes easy, and the patient falls into an easy sleep, with, perhaps, a gentle perspiration. The dose now is to be so managed as to sustain the depressed state of the circulation. If the veratrum causes much nausea, it may be counteracted by giving a little of a solution of morphia or tincture of opium.

I find that in *pneumonia* it is better to reduce the pulse as soon as possible: the inflammation being in a degree arrested, the lung is saved from the more severe consequences of the *second stage* or that of *red hepatization* of Saennec; for the concrete fibrinous exudation being caused by a peculiar inflammatory action—thus the cause being, in part, removed—this exudation is in a great degree arrested, and the patient, in a majority of cases, enters into a favorable convalescence.

Having used the veratrum viride, for the past two years, in most cases of pneumonia, I will give the outlines of a few well-defined cases:—

CASE No. 1.—March 13th, George P., aged ten years, was taken with chill, followed by febrile reaction; pulse, one hundred and thirty per minute; difficult breathing, cough, severe pain in the left side, and rust-colored sputa.

Physical Symptoms.—Crepitant rale over lower part of left lung; percussion not much changed. Treatment: fluid extract

veratrum viride, four drops; fluid extract senna, one drachm—the senna as a purge. Continued the veratrum viride, in two-drop doses, every three hours, in connection with ten drops of solution of morphia as an anodyne.

14th—Pulse, one hundred—sharp; breathing more free, cough less, rust-colored sputa, restless and wakeful; rales the same, or nearly so. Continued veratrum viride, in two-drop doses, and solution of morphia, twenty drops, every three hours.

15th—Pulse, eighty per minute; less pain in the chest; expectorated freely a yellowish mucous, slightly tinged with blood; crepitant rale less; mucous rale in the upper part of the left lung. Continued the veratrum viride and morphia.

16th—Pulse, seventy-five per minute; tongue cleaning; expectoration copious and easy; rested well through the night; skin soft and moist. Gave the following mixture:—Syrup garlic, 3 i.; veratrum viride, eight drops; morphia, quarter grain. Dose—Half a teaspoonful every four hours. Diet—Milk and water.

19th—No febrile excitement; cough and expectoration diminished; sat up two hours. He was now placed upon wine and quinine, and the patient recovered without further treatment.

CASE No. 2.—March 19th, R. S., aged twenty-one years, was taken with chill, followed by fever, and pain in the inferior part of the left lung; pulse, one hundred and twenty-five; expectoration scanty; tongue covered with a brownish fur; restless and wakeful.

Physical Symptoms.—Healthy resonance diminished over lower portion of left lung; crepitant rale in lower portion of left lung. Treatment—Castor oil, two ounces, as a purge; veratrum viride, four drops, increasing one drop every three hours, with mucilage gum arabic.

20th—Pulse, one hundred, soft and regular; rust-colored sputa; pain less; cough hard; breathing easy; tongue a little enlarged; decubitus dorsal; head and shoulders raised; not as much restlessness; rales similar. Gave the following pill:—Podophyllin, one grain; leptandrin, two grains; solid extract apoc. canabi., one grain—as a cathartic and alterative. Gave veratrum viride,

three drops every three hours, with half a grain quinine and mucilaginous drinks.

21st—Much improved; no pain in the chest; pulse slow, sixty per minute; cough loose; tongue cleaning and moist; crepitant and mucous rale on oscultation. Gave veratrum, two drops; quinine, one grain; wine, one drachm, every four hours.

22d—Rested well; symptoms all improving. Continued veratrum, quinine and wine.

23d—Coughed much through the night; pulse regular; sat up this morning one hour; appetite returning. Gave of the following mixture:—Fluid extract veratrum viride, $3\frac{1}{2}$; quinine, gr. 10; wine, \mathfrak{z} ij.; syrup of morphine, \mathfrak{z} i. One drachm four times a day.

24th, 25th, and 26th—Coughed but little for the past three days; tongue mostly cleaned; sat up four hours; ordered mixture to be taken occasionally. He recovered without further treatment.

Other cases might be given; but I would say, that where the veratrum has been used the patient has not failed to recover, except in two cases.

I have used the veratrum viride in *acute rheumatism*, but its influence was not so prompt and decided as in *pneumonia*. Perhaps it could be accounted for, as it was not given in as large doses, and more morphia was given in connection with it.

The average duration of the disease has been nine days. I usually use the following formula:—

R.—Fluid extract veratrum viride, 3 i.
Wine, \mathfrak{z} iv.
Sulphate of morphia, gr. vii.

Dose—Teaspoonful every three hours, using, at the same time, acidulated drinks, and sponging the patient freely with an alkaline solution: keeping the bowels open at the same time with sulphate of magnesia.

I have used it in dysentery, as recommended by Dr. Tully, with good effect, and can confidently recommend it, in connection with morphine, as one of the most efficient remedies, in

the treatment of *simple dysentery*, that we have.

I have used the remedy in many cases of *idiopathic fever* with much benefit, although it is in *enteric* or *typhoid fever* in which the remedy seems to have the most beneficial influence, especially when we have a frequent pulse and a sthenic condition of the system. In those cases I usually give it combined with morphia, and in the asthenic cases with quinine.

I find that in *enteric fever* it is better to reduce the pulse gradually, and use the veratrum in as small quantities as possible, and always combined with morphia; and from two to three days is soon enough to reduce a pulse of one hundred and twenty beats to seventy, which it is very essential to maintain, as it is very difficult to reduce the pulse a second time.

In asthenic cases I use the following mixture:—

R.—Veratrum viride,	Two drops.
Solution sulphate of morphia,	Half drachm.
Sulphate of quinine,	Quarter grain.
Aromatic sulphuric acid,	Two drops.

Mix, and give every four hours, adding more of the veratrum if the pulse is not affected in from eight to twelve hours; and we can, in fact, say that veratrum viride is applicable to all stages of *enteric fever*, if properly combined with other medicines, and given in requisite quantities.

In coughs, resulting from an inflammatory action, veratrum viride is one of the best remedies we have. The following makes an excellent cough mixture:—

R.—Tincture sang. canad.,	3 ii.
Vini. ipecac.,	3 iii.
Fluid extract veratrum viride,	3 i.
Sulphate of morphia,	gr. iii.
Alcohol,	3 ii.
Simple syrup,	3 iii.

Dose—Teaspoonful four times a day, for an adult.

On the Therapeutic Value of Foreign and Indigenous Medicinal Plants.

BY H. A. TILDEN.

(From the Proceedings of the American Pharmaceutical Association.)

THE question relating to the comparative therapeutic value of foreign and indigenous or cultivated plants, assigned to me at the last meeting of your Association, I shall be able to report upon but partially this year.

To determine this question satisfactorily, or conclusively, involves experiments and observations of two or more seasons; and inasmuch as the sessions of the Association occur in advance of the season for the maturity of most medicinal plants, I am limited to such as have arrived at maturity, and can, from the limited time allowed, give only such portions of the several experiments concerning each as have been concluded.

No way presented itself of determining all the points involved in the question, inasmuch as the narcotic plants are perhaps the most important, or more particularly referred to in the question, but to make them, as a class, the subject of particular experiment and examination, somewhat after the following plan:—

1. An analysis of five specimens of belladonna, hyoscyamus, aconite, conium and digitatis: each specimen of the different plants of different importation.

2. The preparation of an extract from each specimen; the examination of each extract to determine the quantity of alkaloids, resin, &c., in each; an analysis of the ashes of the extract of each plant, to determine the inorganic constituents of each, and comparison with the analysis of the plant, that we may infer the nature of the soil upon which each grew.

3. An examination of extracts of the same plants of foreign manufacture, and comparison with those made here from foreign plant.

4. The analysis of the soil upon which the several plants are grown here, in general culture, before sowing and also after the maturity of the plant.

5. An analysis of the plants at various periods of growth to maturity.

6. Treatment of each plant upon the same soil with specific manures, as guano, nitrate of potassa, nitrate of soda, and also with a compound of the three.

7. Analysis of the soil specifically manured after the maturity of the plant.

8. The preparation of extracts of each plant specifically treated, as well as of general culture: analysis of each.

9. The organic analysis of very many of our indigenous medicinal plants which are extensively cultivated, causing the plant, both cultivated and wild, to be collected once a month: analysis of both, that we may determine at what period of growth the largest amount of medicinal principles are present.

Pursuant to the general plan, I caused different sections of a large field of *hyoscyamus*, of the second year's growth, to be watered—one with a solution of nitrate of potassa, another with a solution of nitrate of soda, and another with a solution of guano—until the plants had reached maturity or the period of full bloom.

The plants watered exhibited marked difference in vigor of growth over other portions of the field, that portion upon which nitrate of potash had been applied being of a much darker green color than that watered with nitrate of soda, and both much greener than that watered with solution of guano. The same difference in appearance was observable in a field of the same plant of the first year's growth.

At maturity the plants were collected and submitted to an uniform process of crushing, expression, and subsequent maceration of the pulp in alcohol. The expressed juice and alcoholic solution were evaporated to a pillular consistence.

A portion of each extract was dried, and treated by strong alcohol to dissolve the chlorophylle, alkaloid and resinous principles evaporated, and treated with hot water to separate the resin and chlorophylle. The solution in hot water was boiled with oxide of lead, to separate the coloring matter, filtered, and the filtrate evaporated to dryness, giving a nearly white substance having marked alkaline reactions. Per centage in the extracts, as follows:—

	ORDINARY CULTIVATION.	GUANO.	NITRATE OF POTASSA.	NITRATE OF SODA.
Impure alkaline substance,	20.800	23.816	24.365	25.850
Coloring matter,	14.855	12.833	12.795	13.445

The alkaline principle, heated in a tube with *potassa*, disengaged ammonia largely, showing the presence of a large amount of *nitrogen*, and indicating the presence of a vegetable alkaloid.

The precise character of this impure alkaloid, to which the plant undoubtedly, to a great extent, owes its activity as a medicinal agent, we are now unable to state: reserving this for further examination.

The disengagement of strong ammonia indicates the presence of an alkaloid, probably *hyoscyamia*, as found by Brande.

The variation of this principle in the different extracts, as shown by the table above, enables us to draw the inference, fairly, that the different methods of treatment of the plant, or cultivation, produce a marked difference in its development; and we have no doubt, from the difference in the ammoniacal odor perceptible when each are tried with potash, that the pure *hyoscyamia* will be found to vary in similar proportion.

The *chlorophylle* and resin were separated by dissolving the *resin* in alcohol of the specific gravity of 90°, filtered, and the filtrate evaporated to dryness.

The residuum insoluble in alcohol was treated by cold water, to determine the *starch*; the soluble portion evaporated to a syrupy consistence, and the gum and albumen precipitated by alcohol.

The coloring matter contained in the aqueous part, together with the sugar, were not determined.

The result of the examination of this portion was as follows:—

	ORDINARY CULTIVATION.	GUANO.	NITRATE OF POTASH.	NITRATE OF SODA.
Soluble in alcohol, ..	47.244	49.229	45.269	44.829
Alkaline and coloring matter,	35.433	36.453	37.162	39.325
Resin,	11.811	13.076	5.405	4.281
Chlorophylle, .....	.....	.....	2.702	1.223
Starch,	2.482	2.561	1.992	1.999
Gum and albumen, ..	5.490	6.662	6.002	9.890

Another portion of each extract was dried and incenerated; the combustion was not carried far enough to produce entire destruction of the carbon. The ashes were then treated as follows:—

The carbonic acid gas was determined, by weighing, by hydrochloric acid, on the apparatus of Will; the solution was then placed in a porcelain dish, and evaporated to dryness, then dissolved in water, acidulated with a little hydrochloric acid, and filtered—the residuum upon the filter giving carbon and silica. From the filtered liquor all lime was precipitated by oxalate of ammonia, filtered, and the lime estimated in the state of sulphate of lime. The filtered liquor was evaporated to dryness, to expel the salt of ammonia previously added and the residuum dissolved in water. To the solution was added ammonia, which precipitated the phosphate of magnesia, oxide of iron, and alumina. These were separated from each other by the usual known process. From the filtered solution free *phosphoric acid* was precipitated by sulphate of ammonico-magnesia.

Another portion of the ash was dissolved in water, acidulated with nitric acid, filtered, and divided into three portions. One portion was treated by nitrate of baryta, to determine the *sulphuric acid* and by nitrate of silver, to determine the *chlorine*.

A second portion was treated by antimoniate of potash, to determine the soda; a *third*, by chloride of platina, to determine the *potassa*, and the nitric acid was estimated from another portion of the ash, by Pelouse's process.

The several extracts gave as follows:—

	ORDINARY CULTIVATION.	GUANO.	NITRATE OF POTASH.	NITRATE OF SODA.
Silica,.....	35.558	26.371	28.382	27.392
Phosphate of lime, ..	35.153	38.815	32.161	33.022
Carbonate of lime, ..	4.723	4.440	8.129	7.144
Phosphate magnesia, ..	6.932	10.764	5.231	5.707
Carbonate potash, ...	7.950	8.106	11.407	5.761
Sulphate potash,	1.895	2.860	3.012	1.769
Chloride potash,	2.441	1.326	2.254	1.196
Nitrate potash,	1.509	1.500	4.299	1.196
Oxide of iron,	1.509	1.818	1.332	1.191
Alumina,	0.923	612	1.803	0.722
Nitrate of soda, .....	....	....	....	3.391

Carbonate of soda, ..	....	1.800	....	10.084
Lost,	1.407	1.588	1.990	1.425
Total,	100.000	100.000	100.000	100.000
Ashes,	17.283	23.364	28.358	23.048
Total salts of potassa,	13.795	13.793	20.972	9.822
Total salts of soda, ..	....	1.800	....	13.475
Total both,	13.795	15.592	20.972	23.297
Total phosphates,	42.085	49.597	87.892	38.379

It should be observed that the sections watered were sufficiently near as not to cause any variation in the character of the soil. It will be seen that potassa exists in the ordinary extract naturally, and is increased by special treatment nearly fifty per cent., while soda does not, and by treatment with soda the potassa is lessened from the natural proportion about thirty per cent.; the total of soda nearly equals the total of potassa in the natural, and the nitrate of soda and nitrate of potassa taken together, exceeding the nitrate of potassa in the one treated by it, leaving the inference that when potash exists in the soil and soda does not, that the latter should be used, so as to afford the largest amount of nitrates, and showing the disposition of the plant to take up both, unless it shall be shown by further investigations that the plant in which nitrate of potash exists naturally affords the largest amount of alkaloid, which is hardly probable.

This analysis explains the cause of the appearance of nitrate of potash, in crystals, upon the surface of the inspissated extracts of hyoscyamus.

It is not difficult to determine the different matters of which a plant is composed, but it is quite another field of investigation to determine the manner in which these substances are produced, and follow the complicated processes which constitute vegetation. The multiplicity of operations continually going on in vegetation at the same time, the variety of substances formed out of the same compound, the harmony, skill and certainty which attends all the operations, are too wonderful to pass our observation, and too important not to challenge thorough investigation.

The researches and discoveries of agricultural chemistry fully

establish the fact that plants require for their growth and perfect development certain inorganic constituents, which are different in different classes of plants. And the object of our inquiry is to ascertain what inorganic constituents are indispensable for the growth of the cultivated narcotics and perfect development of those principles, upon which their value as a medicinal agent depend.

The utility of alkalies in the form of nitrates, or, indeed, in any form, cannot be doubted; nor can their utility in the formation of organic alkaloids in plants be considered a question.

Liebig says "the existence of vegetable alkalies in combination with organic acids gives great weight to the opinion that alkaline bases in general are connected with the development of plants;" and it remains to be determined, by further experiment and analysis, which salt is most efficient in the development of the peculiar alkaloids upon which the medicinal activity of each narcotic appears to almost entirely depend, establish the true source of the active principles of other classes, and ascertain by what process the development of resinous and neutral principles likewise depends.

Remarks on Concentrated Preparations, Simple Tests, and Easy Method of Analysis.

HAVING given, fully, the general rules for the analysis of concentrated preparations, we now propose to consider each one separately, its composition, reactions, purity, and how to ascertain its adulterations.

When prepared, some of these preparations are dry, and capable of being easily reduced to a fine powder; others, after the evaporation of the water, are yet greasy or oleagenous, and cannot be made into a powder except by the admixture of a foreign substance—inert or without medicinal properties—which, uniting with the oily property, facilitates the pulverization of the preparation. That usually employed is sugar of milk. Latterly, the powder of the substance from which the article is made is employed. Whatever it may be, it should be stated upon the package, that the per centage of admixture may be known to the physician.

These preparations are finding considerable favor with the medical profession, and are increasing in number. I have now investigated forty-four, those most in use by the profession.

For convenience of consideration, I have divided them into two classes:—

CLASS I.

CONCENTRATED PREPARATIONS REDUCED TO A POWDER, WITHOUT THE ADDITION OF A FOREIGN SUBSTANCE.

DIVISION I.

Pure Resins, Alkaloids, or Neutrals.

Podophyllin,	Caulophyllin,	Hydrastina,
Jalapin,	Sanguinarin,	Corydalina,
Cimicifugin,	Sanguinarina,	Salicin.

DIVISION II.

Resin Mixed with Alkaloid, Neutral, or Tannin.

Leptandrin,	Prunin,	Rhumin,
Cornin,	Myricin,	Rhusin,
Geranin,	Juglandin,	Eryngin.

CLASS II.

CONCENTRATED PREPARATIONS REDUCED TO A POWDER BY THE ADDITION OF A FOREIGN SUBSTANCE.

DIVISION I.

Resin, or Oleo-Resin, Mixed with a Foreign Substance.

Hydrastin,	Populin,	Dioscorein,
Asclepidin,	Corydalin,	Liatrin,
Xanthoxylin,	Aletrin,	Iridin.

DIVISION II.

Resin, or Oleo-Resin, with Alkaloid, Neutral, Tannin, &c., Mixed with a Foreign Substance.

Veratrin,	Chelonin,	Apocynin,
Scutellarin,	Senecin,	Baptisin,
Lobelin,	Stillingin,	Alnuin,
Eupatorin,	Cypripedin,	Helonin,
Eupurpurin,	Trillin,	Lupulin.
Hyoscyamin,		

It is very probable that more will be found and introduced, at this time the above are the only ones which are in common use.

Podophyllin is prepared from the root of mandrake (*podophyllum peltatum*), indigenous to various parts of this country.

It has been stated by some writers that podophyllin contains three principles, viz.: resinoid, neutral, and alkaloid. This is a mistake. Pure *podophyllin* is a pure resinoid, composed of two resins, and no neutral or alkaloid principle. In another place we shall refer to these principles, and demonstrate that such podophyllin is an hydro-alcoholic extract.

Properties of Pure Podophyllin.—Its color varies according to the mode of preparation, varying from a dark brown to a lemon yellow. It is insoluble in acids; precipitated from its solutions by them; soluble in alkaline solutions; insoluble in cold or hot water, either pure or acidulated; dissolves entirely by alcohol. When its alcoholic solution is evaporated to a syrupy consistence, and mixed with water, all the podophyllin is precipitated, and the filtered liquor is colorless. A portion only is soluble in ether; the insoluble portion is soluble in alcohol. Experiments with the root collected in the spring and autumn give the following results:—

	PODOPHYLLIN FROM THE SPRING ROOT.	PODOPHYLLIN FROM THE AUTUMN ROOT.
Resin, soluble in ether,.....	54.34	39.95
Resin, soluble in alcohol,.....	45.66	60.05
Total,.....	100.00	100.00

Properties of the Alcoholic Extract of Mandrake.—The color is dark brown; exposed to the air it absorbs water, and becomes soft; is soluble in alkalies: partially so in acids. Water dissolves a very bitter principle, which is probably the so-called alkaloid, and neutral alcohol dissolves it entirely. When the solution is evaporated to a syrupy consistence, and added to water, a portion only is precipitated, and the filtered liquor is highly colored. Ether dissolves but a small portion, being that portion of the resin soluble in it.

Experiments were made with the mandrake root collected in the spring and autumn, with the following result:—

	EXTRACT FROM THE SPRING ROOT.	EXTRACT FROM THE AUTUMN ROOT.
Soluble in water,.....	68.65	41.64
Soluble in alcohol,.....	31.35	58.36
Total,.....	100.00	100.00

The portion soluble in water is the bitter principle; that soluble in alcohol are the resins.

Properties of the Hydro-Alcoholic Extract.—The hydro-alcoholic extract has a color somewhat darker than the alcoholic extract. It attracts moisture more rapidly from the atmosphere than the alcoholic extract; partly soluble in acids; soluble in alkalies; partly soluble in alcohol and ether. When the alcoholic solution is evaporated to a syrupy consistence, and mixed with water, some podophyllin is precipitated.

The hydro-alcoholic extract yields:—

Soluble in water,.....	67.05
Soluble in alcohol,.....	32.95
Total,.....	100.00

Properties of the Aqueous Extract.—Much darker color than the last; cannot be reduced to a powder without the addition of some foreign substance; attracts rapidly the moisture of the atmosphere; soluble in acids and alkalies; a portion is soluble in alcohol, but the alcoholic solution does not precipitate any resin; insoluble in ether.

It will be observed that it is not difficult to distinguish *podophyllin* from the extracts of mandrake, for when treated by pure alcohol—if the article is entirely dissolved—it is either *podophyllin* or an alcoholic extract. These are distinguished by the quantity of podophyllin precipitated by water from the alcoholic solution. If the article is not entirely dissolved in alcohol it is an hydro-alcoholic extract. These are distinguished by adding water to the alcoholic solution in the hydro-alcoholic extract that the *podophyllin* is precipitated. In the aqueous extract none will be found.

Pure Podophyllin Mixed with Syrup of Milk, Salt, Magnesia, or Powdered Root.—Treat the mixture by strong alcohol till all the podophyllin is dissolved; the foreign substance remains insolu-

ble; filter, wash well with alcohol, and dry. The weight gives the amount of adulteration. To determine the character of the adulteration, we refer to another part of our article.

Alcoholic Extract Mixed with same Articles.—Treat the same as for pure podophyllin.

Hydro-Alcoholic Extract Mixed with same Articles.—If the substance is magnesia or carbonate of magnesia, treat the mixture with alcohol, proof or 56°; collect the insoluble residuum on a filter, wash it with alcohol, and dry. Its weight gives the magnesia or carbonate. If the substance is *sugar of milk*, treat the mixture by water, and filter; pass the aqueous solution through animal black, filter, and evaporate to dryness. The weight gives the quantity of sugar of milk. If salt, deodorize by animal black; precipitate the chlorine by nitrate of silver, and use the formula given in the last article.

Aqueous Extract Mixed with same.—If sugar of milk or salt, proceed as above; if magnesia or powdered root, dissolve in water, filter, and wash residuum well. Its weight will give the quantity of mixture.

American Pharmaceutical Association.

THE Massachusetts College of Pharmacy gave to this body a complimentary dinner, at the American House, Boston, on the 15th of September last, on which occasion, in reply to a sentiment offered complimentary to the Association, the President, S. M. Colcord, made the following remarks:—

In replying to your sentiment, and the call made upon me, it would seem proper that I should make some statements as to the origin, the past doings, and the future work of this Association. It originated through a call made by the New York College of Pharmacy for a convention of delegates from other Pharmaceutical Societies, to meet in New York in 1851, for the purpose of a general agreement as to the form and substance of a memorial to the Treasury Department of the United States Government, so to instruct the special examiners of drugs at the different ports of entry, as to insure the benefits of the drug law to the community, and a uniformity in its operations. That convention, after accomplishing the object of its call, adjourned, to meet the next year in Philadelphia, and appointed a committee to draft a plan of operations, constitution, by-laws, and code of ethics, for a permanent organization of druggists and apothecaries throughout the Union, for the general improvement of the trade and the more certain and uniform advancement in

pharmaceutic science and skill. The result was a feeble commencement of the present organization.

The eyes of interested spectators were turned upon us, to learn what would be our action in reference to drugs, as a board of trade, as to quality, and the means we proposed to improve it; how we proposed to meet the various conflicting interests; what action we should take in reference to nostrums; how we should define our position with reference to the medical profession; and the thousand and one forms of medical prescribing, from homeopathic nothingness to dangerous doses, from irregular talent to utter ignorance. These questions were of vital importance to our existence, and, in some form or other, had to be met. The result is a matter of history, recorded in our past proceedings.

Statistical information was very difficult to get, but enough was procured to reveal facts heretofore unknown, and form a basis of action that has served as a valuable aid in the direction of our efforts.

In 1853 the Association met in Boston, as the American Pharmaceutical Association, with a large accession of numbers. Its proceedings were published in a pamphlet of some fifty pages. After much discussion it adjourned, to meet the next year in Cincinnati, where we became the guests of the Cincinnati College. Most of our members belonging to the Atlantic cities, and the cholera somewhat prevalent that year, rendered it hazardous to travel and difficult to leave business in the warm and sickly season. The attendance was small from distant portions of the country; but our Cincinnati brethren gave us a warm welcome, and sent us away with pleasant remembrances of their hospitality, and considerable accession in numbers.

In 1855 the Association met in New York, where we had again our usual success—gaining in strength, in influence, and in numbers. The proceedings each year became more interesting and instructive, with constant acquisitions of active members, and contributions to our stock of information and usefulness. This year a good delegation met with us from Maryland. In Baltimore quite an interest was manifested in our labors, and we received an invitation to meet there in 1856, which we did, manifestly to the benefit of our profession in that quarter, to the benefit of their local society, and, I believe, resulting in the organization of the Pharmaceutical Society of the District of Columbia. The glowing descriptions of the hospitality of our Southern brethren were spread abroad through all the drug stores in the land, melting and fusing the icicle sharpness of Mason and Dixon's line, and, as it were, cementing a union where nothing was wanting before in our ranks but to bring together the fire, the crucible, and the precious metals.

In 1857 the Association met again in Philadelphia, where we met with a cordial reception. It was here that originated the idea of a permanent organization. Here were its warmest friends and our greatest workers; here is, as it were, the heart and pulse of medical science and literature. In this city is properly represented the actual state of the drug trade in the whole country: for here we have the scientific professor, with schools of pharmacy of great

merit, and well attended; the adherents of the regular pharmacopœia and practice; homeopathy, with its allopathic pretensions and homeopathic results, as well as the headquarters of *nostrums*, or, strictly speaking, popular medicines; Swain's panacea, with its array of vegetable cures for mercurial diseases; Vice-President Wright's Indian vegetable pills, purging the world of hereditary evils, and opening the passages of present and future generations to untold health. It is Philadelphia *brotherly love*, more than any other city, that promises the sure cure of consumption, our bills of mortality to the contrary notwithstanding; and it is here that this Association finds its warmest advocates, its best friends, reliable *working* men, truth seekers, truth imparters, scientific investigators, who seek to be instead of to seem, to do instead of profess. But, Mr. President, it is unnecessary for me to laud them: our past records tell the story, our present meeting finds them at their post, and this evening's entertainment finds them with us to tell their own story. At this meeting an unusual interest was manifested, the number and value of our papers were much increased, and our published proceedings were double any former edition. At this meeting our Quaker friends set us an example worthy of imitation by those of similar sentiments. They have uniformly looked with disfavor upon convivial entertainments at our meetings, as tending to injure the usefulness of our migratory character, by making it too expensive, if such practices continue, to meet in small places. I do not understand them that they look with disfavor upon our social manifestations, but it is decidedly against their principles to hold the cup to their neighbors' lips; and while I hold in honor their bountiful but strictly temperance entertainment, or the omission of any from principle, I do not dislike the sentiments of those who honestly differ from them, by entertaining their friends according to the habits and disposition of each: who never urge an abstemious man, against inclination, to the enjoyment of other people's tastes, and who provide for the enjoyment of their guests according to individual inclination, even though it may be against their own sense of propriety: for there are those, even in this temperance State of Massachusetts, who honestly think that

"God in kindness gave the grape to cheer both great and small,
That little fools they drink too much and great ones none at all."

In 1858 we met at Washington, by invitation of the Apothecaries' Association of the District of Columbia. This was by far the most successful meeting we have held. Essays and scientific papers were presented beyond our calculation; our numbers were very much increased; the length and breadth of the land seemed interested in our movements; the Government manifested their interest by soliciting our active coöperation in the agriculture department of the Patent Office, so far as relates to the introduction and improvement of our botanical remedies, and issued a circular of instructions to all its Indian agencies, to collect all information respecting the remedies employed by the Indians, for publication in our proceedings.

The Smithsonian Institution opened their doors to us, and welcomed us as co-laborers in the diffusion of knowledge among mankind; their professors

attended our meeting, and with instructive speeches and kind words encouraged us to coöperate with them in their active labors of usefulness.

Our numbers were increased by a large addition of useful members; our hearts were warmed by the attentions and hospitalities we received by that small but chosen band of well-wishers to our cause, and our published proceedings exceeded in amount, if not in value, all our previous publications.

And now, Mr. President, we have met for the second time in Boston: away in one corner of the dominions covered by the star-spangled banner. Our first meeting was composed of nine representatives of the then three existing colleges of pharmacy: we are now represented by upwards of four hundred members, from twenty-eight States and eleven local colleges and associations.

Have we not great cause for encouragement to proceed in our labors. In addition to what we have done, our labors seem to increase in proportion to our development. We have yet to consummate the full benefit of our drug inspection law; we have yet to purge the country of its awfully pernicious influences of adulterations in food as well as in medicines; we have yet to educate a competent corps of honest and reliable pharmacutists, on whom the country can rely, in some measure, as a sanitary board of health; we have yet to gain political influence sufficient to regulate the sale of poisons, and to enable us to prosecute our legitimate business as honest pharmacutists, and law-abiding citizens, without fear of the House of Correction; we have yet to overcome local jealousies, which alone can be done through the agency of a national organization; we have yet to cultivate tastes for scientific attainments as amusements, to be found inside our legitimate daily occupations, from absolute want of time to gratify them outside our daily routine; we have yet to educate the public mind as to the true value of nostrums; we have yet to demand a trial by our peers for accidents and misdemeanors in our daily avocations; we have yet to cultivate true dependence as well as independence, and harmonious and active coöperation with the legitimate medical staff; we have yet to consolidate union of feeling, sentiment and action—North and South, East and West! So much to be desired in the realization of our hopes.

And now, Mr. President, I have endeavored to give you an idea of our past history, and what I conceive to be our mission; I have now only to present our Association itself for your approval. As it were, a miss (yet not amiss) of nine summers, of fair promise and some development, in hoops, tall as the Rocky Mountains, surrounded by upwards of four hundred guardian circles, and whose ample skirts already sweep a continent from ocean to ocean. Success to her perseverance; and may she ever, in youthful vigor, preside as a goddess of liberty over the destinies of pharmacy throughout our entire country, where she has "spread herself," until sickness and death shall require her services no more.

Arnica Montana.

The therapeutical properties of leopard's bane is made the subject of an article in the College Journal, by Dr. T. C. Miller, and we abstract as follows the observations he has made with it in his own practice. He says:—

I have been accustomed to use it for twenty-eight years. In nervous fevers characterized by torpor this remedy is very valuable to rouse the sinking energy of the nerves, particularly the nerves of the abdominal viscera, while at the same time it increases the contractile power of the muscular fibres, and especially the fibres of the unstriated muscles of the walls of tubes and ducts. It is a very valuable remedy in enteric fever, and where there is colliquative hemorrhages, passive sweatings, and exanthemata of the abdomen. It will not take the place of valerian, quinia, camphor, or the acids, for its action on the system is unlike that of either and all of these. These four great remedies have each its own distinctive influence, and each is a valuable aid to the others, when needed.

In inflammations combined with torpidity, as in typhoid pneumonia, in inflammation of the brain and its coverings, in gangrene, and other similar affections, it requires oftentimes camphor, quinia, and perhaps opium, to be given in conjunction with it.

In obstinate maltreated intermittents, with torpidity of the abdominal viscera, and engorgement and enlargement of the spleen and liver, and perhaps abdominal dropsy, and in the so-called typhoid cholera, arnica is of great value. My brother, Lewis E. Miller, uses it in conjunction with ether in those cases.

In old, atonic gout and rheumatism, especially locally applied, it always is of value. In dysentery, where the disease is complicated with torpidity of the bowels, or constipation, exhaustion, or colliquative dysentery, it is peculiarly indicated. In these cases I consider the root preferable to the flowers.

In passive hemorrhage, of a scorbutic character; in discharges from the respiratory or the reproductive organs; in bloody or serous extravasations caused by contusions and hurts, it is the main remedy I depend upon. It is also very valuable in atonic dropsies. The external use of the flowers, in tincture or infusion, is the best agent I have tried in acute hydrocephalus.

In paralysis, particularly where the paralysis has been caused by mechanical influence upon the brain or spinal marrow, but the nerve structure remains intact—not by congestion or softening of the nerve structure—and in the commencement of amaurosis, it has always proved of utility. Theilmann, in treating amaurosis, made use of an infusion of three drachms of the flowers to eight ounces of water, and gave a large spoonful at a dose, once in three hours.

In enlargement, torpidity, or engorgement of any of the abdominal viscera, and also in suppression of the menstrual, lochial or hemorrhoidal discharges in consequence of torpidity, its use is of great value. Leidbeck speaks very favorably of it in varicose veins of pregnant women. I have derived great benefit from it in such cases.—*Peninsular Independent.*

Strychnia in Chronic Intermittents.

In the New Orleans *Medical News and Hospital Gazette*, Dr. Harrison, of Arkansas, has an article upon the use of strychnia in chronic intermittents. The following is his formula:—

“R.—Strychnia, gr. iss.
 Sulphate quinine, gr. xv.
 Capsicum, gr. vj.
 Brandy, ℥ iv. M.

“Of this mixture, I direct one teaspoonful (for an adult) every hour, for six or seven hours preceding the expected paroxysm; at the end of this time I require the patient to take a cup of warm sage tea, and go to bed, (if he is not already there,) and remain until the paroxysmal hours pass. This course is to be repeated on the next ‘chill day,’ after which a teaspoonful of the medicine is to be taken two or three times a day, until the four ounces are exhausted.”

With Dr. H. Campbell's views of the nature of this disease, and of its relation to the nervous system, the philosophy of this treatment becomes at once apparent. This, however, is not altogether new treatment. Dr. Brainard, of Chicago, recommended strychnine, in an eighth-of-a-grain dose, three times a day, in similar cases, more than twelve years ago. (See *Indiana Medical Journal* for July, 1847.)

We are confident that the remedial powers of strychnia are not yet fully brought out. So far as we know, we were the first to use and recommend it in *sciatica* and chronic rheumatism; and we have seen cases of dyspepsia and chronic costiveness yield to it like a charm.

Treatment of Ascaridas.

The treatment for *ascarides vermiculares* should be entirely local; but, if mercury is here an excellent anthelmintic, nitrate of silver in enemas would appear to be no less efficacious, and its action is much more rapid. Dr. Schultz Bipon, of Daidesheim, has published in the *Deutsche Klinik* the formula of the solution he employs in this circumstance, and the effect of which, he says, is infallible. The following is the formula:—

R.—Argenti nitratis cryst., 8 gr.
 Aq. distill., 6 oz.
 for an enema.

This enema is perfectly harmless. Three are usually required for cure. The first is generally retained imperfectly; the patient returns it shortly after it is administered with a great number of *ascarides*. It should be repeated the next and following days, and it seldom happens that after a treatment of four days the rectum is not rid of its troublesome guests, whose presence gives rise to such various and strange symptoms.

Erysipelas.

In the *Medical and Surgical Reporter* for August 13th, J. R. McClurg, M. D., of Philadelphia, has an able article upon the above subject. In regard to treatment, after the action of an emetic and a saline cathartic, combined with a mercurial, if there be symptoms of bilious derangement, he says:—"I always use some tonic medicine, and my favorite prescription, and the one I uniformly use in all cases of erysipelas, of whatever form or character, as soon as the system is prepared for it, is:—

“R.—Spiritus ætheris nitrici, f. ʒ ij.
 Tinctura ferri sesqui chloridi, f. ʒ ij.
 Quiniae sulphatis, gr. xvj.

Misce et S. Take a teaspoonful every three hours. This constitutional treatment I have found very successful in my hands, and desire nothing better.”

This corresponds very nearly to the treatment we have found very serviceable. We are, however, in the habit of prescribing the tincture of iron in a little larger doses, say twenty drops every three hours; and the quinine in combination with Dover's powders, from one to two grains of the former to five of the latter, every four or six hours.—*American Medical Monthly.*

Selections.

NOCTURNAL INCONTINENCE OF URINE.—A writer in the *Bulletin de Thérapeutique* recommends the employment of mastic in these cases. It is given in pills, made with syrup. It is necessary that thirty-two grammes should be administered in four days, if the child is under ten years of age. When under that age, the amount mentioned should be given in six or eight days. If a cure does not result from the first trial, a second trial with a like quantity should be made; but if the incontinence persists after the second trial, it is useless to continue the medication. The failures are, however, exceptional, as two-thirds of the cases have been successful, even in patients from eighteen to twenty-four years, who had been affected with this disgusting infirmity from infancy.—*American Medical Monthly.*

TREATMENT OF NASAL POLYPUS BY TINCTURE OF MURIATE OF IRON.—Dr. J. H. Reeder, of Lacon, Ill., reports, in the *Chicago Medical Journal*, two cases of nasal polypus, which he had successfully treated by the application of the tincture of muriate of iron, by injections, and by means of a bit of sponge. In both cases the disease was removed in a few days, it having existed, in the last instance, more than ten years, completely obstructing both nostrils.

IPECACUANHA AND DELIRIUM TREMENS.—The jail physician of Chicago has had a hundred cases of delirium tremens the past year, of which only four proved fatal. Of his manner of treatment, the doctor says:—"Ipecacuanha,

which I have tried in thirty-six cases, I found most remarkably successful, quieting the nervous system, exciting the appetite, acting on secretions, and uniformly producing sleep. When a case is not of too long standing, I give it as an emetic the first dose, and afterwards I give from fifteen to eighteen grains every other. Connected with this remedy, I use shower-baths, and let the patient drink strong beef-tea, without any alcoholic stimulants."—*Southern Medical and Surgical Journal*.

ATROPIA IN TETANUS.—The editors of the *Semi-Monthly Medical News* report the successful treatment of a case of tetanus with atropia, in doses of one-twentieth of a grain, repeated every third hour until narcotism was produced. They say:—"So far as the illustration of its influence in the treatment of this case furnishes us authority for speaking, we are satisfied that our appreciation of atropine, as a remedy in tetanus, cannot be over-estimated. It subdued, time and again, with a promptitude and a measure of extent too striking to be mistaken, the increasing spasms, and soothed the general excitement of the system."—*Ibid*.

ITCHING OF THE ANUS.—There are few things more distressing and troublesome. Use the following ointment:—Glycerine, one ounce; purified tar, half a drachm; and, with the aid of heat, powdered starch, half an ounce. This makes an ointment of thin consistence, and easily spread. It dries up excoriations, checks exhalation, and dissipates slight cutaneous phlegmasiæ. Another preparation of pitch is the following:—Cod-liver oil, two parts; oil of pitch, one part—used for itching and excoriations, as the other. (M. Gilbert, p. 185.)—*Braithwaite's Retrospect*.

ANODYNE LINIMENT IN OTITIS.—M. Trousseau recommends the following liniment in acute otitis, viz.: a mixture of the alcoholic extract of belladonna in water, with glycerine. A cotton ball soaked with the mixture to be placed in the external auditory canal.

GELSEMINUM IN TENESMUS.—In an obstinate case of sporadic dysentery, where every remedy I used failed to relieve the severe tenesmus, and the tincture of gelseminum and tincture of aconite combined had also failed, I added an infusion of gelseminum to an infusion of slippery-elm, and used it as an injection. Then the disease readily yielded.—*Dr. Miller*.

VERATRUM VIRIDE IN DYSMENORRŒA.—So far as my experience goes, I have found the veratrum very good in dysmenorrhœa of plethoric patients; but uniformly hurtful to those who are anæmic. I have frequently added a little morphia to it with benefit.—*Ibid*.

SANGUINARIA CANAD. IN DYSMENORRŒA.—I find the tincture of blood-root of value where the distress or difficulty of menstruation is connected with disease of the liver as the primary affection. Large doses are injurious, but small ones may be often repeated.—*Ibid*.

CROCUS IN DYSMENORRŒA.—The tincture of saffron is valuable in that form of dysmenorrhœa, where the liver is the primary cause of the difficulty. It may be given at the same time with the tincture of blood-root.—*Ibid*.

Editorial.

OUR JOURNAL.—The present number completes the first volume of the new series of the JOURNAL OF MATERIA MEDICA, and we are gratified by being able to say that our efforts have been seconded by the profession beyond our expectations, which, with their renewed assurances for its success, makes it no longer an experiment, but establishes it as a permanent journal, which will be increased in size for the ensuing year: each number containing *forty pages, and at the same terms as the present year.*

We have tried to keep faithfully in view the objects for which the Journal was commenced, and endeavored to present in it whatever of general interest or importance have been published in the journals of this country and in foreign journals, while in its original contributions it has presented dissertations on different valuable medicinal agents and analysss of plants never before published, the value of which to the profession are acknowledged in the numerous testimonials from its subscribers; and confident that there is yet a wide field open, we can assure our patrons that no energy or expense will be spared to secure the coöperation of medical writers of practical experience occupying high positions with the medical profession as medical writers.

The interest which has been manifested in the success of our Journal, and which has caused an addition of eight pages each month to its present size, for the next year, have induced us to devote those pages, for the most part, to a *digest* of the most important and interesting matters contained in the current medical publications of the country, and in the more important foreign journals. This will form a new, important and interesting feature of the next year.

We shall at all times welcome to its pages communications upon subjects of medical interest within the general range of our Journal—shall continue the publication of new and favorite formulæ, and in the department of pharmacy shall give everything of interest relating to progress in this important branch of medicine, and invite the aid and suggestions of all interested in a department where the interests of the physician and apothecary are closely allied.

No effort will be spared to make the Journal worthy of the confidence and cordial support of the whole medical profession, and no feature will be neglected which shall contribute to its usefulness and appearance; and we hope the time is not far distant when we shall again be compelled to enlarge it, to more fully supply the wants of its patrons.

For terms, &c., see Prospectus.

Volumes for 1859 will be furnished, bound, at one dollar, postage prepaid.

We have received from Messrs. Lindsay & Blackiston, Philadelphia, their "Physician's Visiting List" for 1860. It is issued in its usual style, with good paper and binding.

These books are coming into very general use by the profession, and are a very convenient style for daily records and memoranda, and their small cost should cause every physician to procure one.

For fifty patients, tucks, price \$1 by mail, free of postage.

AN INTRODUCTION TO PRACTICAL PHARMACY: Designed as a Text-Book for the Student, and as a Guide for the Physician and Pharmaceutist. With many Formulas and Prescriptions. By EDWARD PARRISH, Graduate of Pharmacy, Principal of the School of Practical Pharmacy, Philadelphia, &c. Second Edition, greatly enlarged and improved. With two hundred and forty-six Illustrations. In one large and handsome octavo volume of 720 pages; extra cloth. Price, \$3 50.

Mr. Edward Parrish, its author, is well known to the pharmacutists of the United States as a clear-minded, practical man; that his contributions to the pharmaceutical literature of this country, his efforts for the elevation of pharmacy as a profession, by elevating the standard of pharmaceutic education, are appreciated; that his work has the approval of those it was designed to benefit, is authenticated in a demand for it which has brought out a second edition, greatly enlarged and improved.

His position as principal of a school of practical pharmacy, and proprietor of a large dispensing establishment, has given him such practical acquaintance with the whole subject as to well qualify him to arrange and present such a work to the public. As a teacher of pharmacy to medical students and others, he had long felt the necessity of a text-book, as an aid to his instructions.

There are in the United States thousands of young men yearly beginning the study of medicine: to them this work is invaluable. Pharmacy, as a branch of instruction, is sadly neglected in most medical colleges. This work, thoroughly studied by the student, will greatly aid him in his entire course; nor is it any the less valuable to a *practitioner of medicine*, who wishes to avail himself of the great practical advances in pharmacy, in all its departments, in the last few years, and to whom it is necessarily an important collateral pursuit.

There are also thousands of young men just entering the drug shop, in localities where the benefits of instruction in pharmacy cannot be had, as well as many apothecaries who from accidental circumstances have become so, without that opportunity of becoming as well acquainted with its principles and manipulations as they could have wished: to them this work is highly valuable. That our readers may better understand the great variety of subjects presented, we give a synopsis of its contents:—

“PART I. *Preliminary*.—Of the furniture and implements necessary to the dispensing shop; of weights, measures, and specific gravity; of the U. S. Pharmacopœia.

“PART II. *Galénical Pharmacy*.—Of the collection and desiccation of plants; on the powdering of drugs, and on powders; on solution, filtration, and the medicated waters; on maceration and the infusions; on percolation and the displacement process; on tinctures, officinal and unofficinal; medicated wines, vinegars, ethereal tinctures, elixirs, and cordials; galénical preparations of opium, officinal and unofficinal; on the generation of heat for pharmaceutical purposes; on the mode of applying heat for pharmaceutical purposes, and on decoctions; on evaporation and the extracts, including concentrated extracts or resinoids; fluid extracts, including oleo-resins; on syrups, officinal and unofficinal, glyceroles and mineral water syrups; on pulps, conserves, confections, electuaries, pastes, lozenges, and candies; on distillation and spirits, officinal preparations, essences for perfumery, toilet waters, &c.

“PART III. *Pharmacy in its Relations to Organic Chemistry*.—Lignin:

its derivatives, collodion, acetic acid, creasote, &c.; on farinaceous, mucilaginous, and saccharine principles; on albuminous and similar principles, and on certain animal products; fermentation, alcohol and the ethers, chloroform and fruit essences; fixed oils and fats, glycerine, &c.; volatile oils, camphors and resins, artificial essential oils, adulterations, &c.; organic acids; on the alkaloids—alkaloids of opium, cinchona, strychnos, of the solanaceæ: ternary alkaloids, alkaloids of animal origin; on neutral organic principles, mostly peculiar to a limited number of plants, and possessed of medicinal properties.

"PART IV. *Inorganic Pharmaceutical Preparations.*—On mineral acids; the alkalies and their salts; on the earths and their preparations; on the non-metallic elements and their medicinal preparations; on the compounds of phosphorous used in medicine; iron and manganese, and their preparations; preparations of copper, zinc, nickel, cadmium, and cobalt; preparations of lead, silver, and bismuth; preparations of antimony and arsenic; preparations of mercury; preparations of platinum and gold.

"PART V. *Extemporaneous Pharmacy.*—On prescriptions; on the writing of prescriptions; on the art of selecting and combining medicines; on powders and pills—suppositories; on liquid preparations, solutions, mixtures, &c.; external applications—lotions, injections, gargles, baths, inhalations, fumigations, cerates, ointments, plasters, cataplasms, liniments, &c.; on the art of dispensing medicines—pills, liquids: rules of a pharmaceutical store.

"APPENDIX.—Rules of a sick chamber; articles of sick diet; physicians' outfits; list of plants; recipes for popular medicines."

A careful examination and comparison with the other edition gives evidence that its author has made very many valuable additions, and that nearly fifty per cent. more matter has been added. To the part devoted to pharmacy, and its relations to organic chemistry, particularly, have large and valuable additions been made. The immense number of facts collated, classified, and systematically arranged; the system of syllabi, before introduced and now much extended, show research, investigation and industry, highly creditable to its author.

In the part devoted to extemporaneous pharmacy have also valuable additions been made. Directions are given for the preparation of all new remedies in use by the profession, and many valuable formulæ are added, and throughout the work is so fully illustrated that all its details are easily understood. In our next issue we shall endeavor to find room to publish many excellent extracts from it, and regret it was received too late to do so in this issue. The practical and instructive character of the work make it precisely what is needed by the country practitioner and student, as well as the apothecary, and hope they will give it an examination, for we are sure they will not regret the investment.

PHARMACY.—Several pages upon Pharmacy have been crowded out by the index, which belongs to this number.

Correspondents will oblige by writing plainly their names, town, county and state. We have, in several instances, been unable to answer letters because these are omitted.

Subscribers will please notify us if they do not receive the JOURNAL regularly.

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BY CHARLES A. LEE, M. D.

NUMBER I.

TONICS are agents which invigorate organic actions. Many agencies do this indirectly, as blood-letting, cathartics, narcotics, diaphoretics, and counter-irritants; but true tonics either impart tone to the digestive organs by primary and local influence, or they so impress the vital properties of the different tissues through the medium of the blood, as to gradually and slowly exalt all the functions of the body. They may be supposed to generate as well as extricate nervous influence, on which depends the vigor of all the vital actions. Some of them, as chalybeates, supply an element essential to the composition of healthy blood; others, like cod-liver oil, act essentially as nutrients. Taken as a class, they influence all the vital properties, and hence are universal excitants to the functions. *Vegetable tonics*, with which we are now more particularly concerned, owe their influence to different organic constituents, as alkaloids, neutral principles, volatile oil, acids, resins, &c. They act both as stomachics and hæmatics, or blood remedies, forming in the stomach new combinations, which are absorbed and afterwards eliminated by the excretory organs. These proximate principles have often been detected in the blood and the different secretions. Like inorganic substances, however,

this influence is partly reflex, especially those belonging to the class of pure bitters. In no instance do they operate upon mechanical and chemical principles, as was formerly supposed.

This class of remedies may be called permanent stimulants or alteratives, and their office is to restore impaired or lost function, and to enable organic nervous or vital power to resist the slow extension of disease, or aid nature in the establishment and progress of convalescence. Like all other medicines, they are relative agents, acting therapeutically only in certain morbid conditions and states of the system; misapplied, they are irritants or sedatives. No fact is better established than that tonics, as often used, prove indirectly debilitating, and counteract the recuperative forces. Errors in pathology lead to frequent misapplication of this class of remedies, especially the confounding apparent with true debility. The property of healthy excitability is confined within narrow limits; if exhausted by over-stimulation, the chances of recovery are materially lessened. In the administration of tonics, we aim to elevate depressed vital power, in a slow and gradual manner, to the healthy standard, aiding and imitating the natural recuperative energies by agents characterized, like the vital stimuli, by permanency of action. Remedial agents which restore the vital energies vary not only in grade, the rapidity and permanency of their action, but also in respect to the organ, system, or tissue, on which their influence is chiefly exerted. True tonics, however, seem to elevate equally all the functions; and by administering them in suitable doses, and at proper intervals, their beneficial influence is propagated throughout the entire system. As soon as one or more important functions are restored the rest participate in the change, and the whole assume a regular discharge of their offices, owing to a reciprocity of vital influence and function existing throughout the economy.

In applying this class of remedies, then, we should carefully investigate the causes of the existing debility, whether it be apparent merely or the consequence of oppressed instead of depressed vital power; whether it may not result from irritation in some part, thus abstracting due energy from others; whether simple or complicated, or associated with change of structure; and after subjecting the case to this pathological analysis, passing all the various functions and organs in review, we then have to de-

cide upon the choice of agents best suited to the particular circumstances of the case. And here great judgment and discrimination are needed. Though closely allied in their remedial virtues, yet no two tonic agents possess identically the same therapeutical powers. Admitting the general rule that vegetable tonics are best suited to those prostrate conditions consequent on protracted acute diseases, and the mineral ones to chronic affections involving more especially the nervous system, and also that certain vegetable tonics possess an antiperiodic power not generally possessed by this group of remedies, we furthermore find that no two of the class possess identically the same properties, and hence we infer that none of them can well be spared from the *materia medica*. This might, in fact, be inferred *a priori*, from the consideration that in no two vegetables are the organic constituents the same. If they agree in kind, they differ in quantity. Some contain volatile oil or tannin, in connection with an alkaloid, neutral or bitter principle. In some the volatile oil, in others the tannic acid predominates; and in a third group the bitter principle is the prevailing power. Yet it is solely by experience and observation that these differences have been established. This variety of chemical composition, however, imparting as it does to this entire group compound attributes of a most important character, is a wise provision of nature to secure an equally corresponding variety of effects. In this belief, we shall pass in review, in our succeeding numbers, all our indigenous plants which are known to possess tonic properties: believing that it is better to have a large than a small catalogue of articles of this class to select from, we shall aid to extend rather than lessen their number.

In the use of tonic remedies the practitioner must ever bear in mind the paramount importance of the vital stimuli—food, air, water, heat, &c.—above all medicinal substances or pharmacological agents whatever: as on the former depends the renovation of all the tissues, leaving no exhaustion behind them. Pharmaceutical stimulants may excite reaction, but they probably never directly increase the vital force. If they accomplish this end, it is by enabling the vital stimuli to exert their wonted effects. This is well illustrated by the effects of friction, which acts as a vivifying stimulus, by exalting the vital properties of the part, drawing

the blood to it, and inducing such vital and chemical changes as to facilitate the action of the vital stimuli. It is now, however, admitted by the best physiologists that there are some medicinal agents, which, under certain morbid conditions, do exert a local vivifying and strengthening influence upon the different organs of the body. Muller has suggested that this effect is produced by restoring the composition of the organ, or by so changing it as to facilitate renovation by the general vital stimuli; though he thinks such cases are rare. Paris has very truly observed that when the vital movements have been accelerated by a stimulant beyond a certain point the consequence will be a corresponding collapse, and that an interval must elapse before the exhaustion can be supplied; but it is not so with tonics, inasmuch as they act slowly yet progressively, so that time is allowed for the full operation of the vital stimuli to supply an influx of power, which shall, at least, equal the demand for it, and consequently no collapse can take place. But more than this is effected; for since the restorative functions necessarily partake of the general excitement, they will be urged with increasing activity, and thus the energies of every part be gradually and permanently increased, and the general standard of strength raised. To insure, however, this desirable result, Dr. Paris dwells upon the importance of so regulating the application of the vital stimuli, by a judicious system of medical training as to insure the full benefit of their revivifying influence. It would not be attended with any important practical results to speculate upon the manner in which these effects are brought about. We know that many of these agents, at least, promote the appetite and invigorate the digestive function, causing a greater quantity of food to be taken, and more thoroughly digested and appropriated to the wants of the system—thus enriching the blood, and rendering it more stimulating to all the functions, and more nutritive to the various tissues. Thus, indirectly, general tonic effects are produced, and probably by a local influence, on the digestive organs. Again, we may believe, in accordance with known physiological laws, and ascertained facts, that they enter the blood vessels and modify the vital properties of the blood; perhaps, as has been suggested, entering into the composition of some of its proximate principles, and so influencing their vital condition as to favor the physiological

actions constantly going on within it, contributing to its full development and maintenance, and so enabling it to perform its offices in the economy with more vigor and efficiency. That iron and cod-liver oil, &c., may act in this way, is not improbable; or we may suppose they sometimes operate, by their presence in the circulation, upon the ultimate organic constituents of the tissues, stimulating into increased activity that special power, which resides in the organic cells, or molecules of the organ. But whatever theoretical views may be adopted in regard to the *modus operandi* of tonics, no one can deny but that when cautiously and judiciously administered, in cases to which they are adapted, the most beneficial effects often follow.

Tonics may often be advantageously combined with other remedies. Those which have an astringent tendency, especially, should be combined with aperients, as first pointed out by the celebrated Hoffman: and to these an alkali will often prove a valuable adjunct. Too much attention cannot be paid to the state of the secretory and excretory organs, for torpidity of function here is itself a direct producing cause of debility. Aloes, rhubarb, and blue mass fulfill this indication with sufficient certainty and efficiency. It should, however, be recollected that while much purgative action counteracts the effect of the tonic, a small quantity of a bitter tonic increases very much the purgative power of a cathartic drug. Some writers have advised the combination of tonics with narcotics, but there are few cases where such union would be advisable. There may be such a condition of the stomach as not to tolerate well the presence of tonics, which may be obviated by an opiate, as in some instances of intermittent fever. It is still customary among *gourmands*, in some countries, to take, after eating, a pastile composed of opium, cloves, mace, nutmeg and musk, the compound being found to favor instead of checking digestion. Dr. Tully has very properly called attention to the fact that, in order that many of the tonics should sit well upon the stomach, and affect the patient agreeably, it is well to accompany their use with some light, nutritious, and easily digestible food, such as milk or rice porridge, arrowroot and milk, &c.

The dose, the intervals between the doses, and the duration of the tonic treatment, must be determined by the peculiar circum-

stances of each case.

The following list, it is believed, embraces nearly all known North American plants possessing tonic virtues. In some—perhaps many—the tonic property does not predominate, but is allied with astringent, stimulant, diaphoretic, alterative, or other qualities. In few does it exist unconnected with other virtues. Some, it will be observed, are included, which have already been enumerated in the class of astringents. Some, however, already noticed under that class have been here omitted. The list would have been much extended by including other species under the astringent genera, but no practical benefit would have attended it.

Our indigenous materia medica abounds more in astringents and tonics than any other class of remedies. So numerous are the former, that we may and should be entirely independent of foreign countries; and as to the latter, our continent furnishes everything necessary. The cinchona, and other aromatic barks of South America, added to the bitter tonics of the United States, furnish the practitioner as complete an armament of medicines of this class as can well be desired. That their virtues should be more thoroughly investigated by practical men is ardently to be desired. The nomenclature of Torrey and Gray has been adopted.

PLANTS INDIGENOUS TO THE UNITED STATES POSSESSING TONIC PROPERTIES.

ORDER.	GENERA.	SPECIES.	POPULAR NAMES.
Ranunculaceae, (Crownfoot Family.)	Hepatica.	H. Triloba.	Liverwort.
		Acutiloba.	Short-lobed Hepatica.
	Coptis.	C. Trifolia.	Gold Thread.
	Zanthorhiza.	Z. Apiifolia.	Yellow Root.
	Hydrastis.	H. Canadensis.	
	Actæa.	A. Spicata.	Baneberry—Cohosh.
		Va. Rubra.	Red Baneberry.
Cimicifuga.		Alba.	White Baneberry.
		C. Racemosa.	Bugbane—Cohosh—Black Snake-Root.
		Americana.	American Bugbane.
Magnoliaceae, (Magnolia Family.)	Magnolia.	M. Glauca.	Sweet Bay.
		Acuminata.	Cucumber Tree.
		Macrophylla.	Great-leaved Mag. Tree.
		Umbrella.	Umbrella Tree.
		Fraseri.	Ear-leaved Umbrella Tree.

ORDER.	GENERA.	SPECIES.	POPULAR NAMES.
Magnoliaceae.	Liriodendron.	L. Tulipifera.	Tulip Tree.
Anonaceae, (<i>Custard Apple</i> or <i>Papaw</i> Family.)	Asimina.	A. Triloba.	Common Papaw, or Custard Apple.
Menisperm'ceae (<i>Moonseed Fam-ily.</i>)	Menispermum	M. Canadense.	Canadian Moonseed.
Nelumbiaceae, (<i>Nelumbo Fam-ily.</i>)	Nelumbium.	N. Luteum.	Water Chinquepin.
Nymphaeaceae, (<i>Water Lily</i> Family.)	Nymphaea. Nuphar.	N. Odorata. Advena. Kalmiana.	Sweet-scented Water Lily. Yellow Pond Lily. Spatter Dock.
Sarraceniaceae, (<i>Pitcher Plants.</i>)	Sarracenia.	S. Purpurea. Flava.	Side-Saddle Flower, or Pitcher Trumpets. [Plant.
Hypericaceae, (<i>St. John's Wort</i> Family.)	Hypericum.	H. Perforatum.	St. John's Wort.
Zanthoxylaceae	Zanthoxylum.	Z. Americanum. Carolinianum.	Prickly Ash, or Toothache [Tree.
Vitaceae, (Vine Family.)	Vitis.	V. Labrusca. Æstivalis. Cordifolia. Vulpina.	Northern Fox Grape. Summer Grape. Winter, or Frost Grape. Muscadine.
Rhamnaceae, (<i>Buckthorn</i> Family.)	Ceanothus.	C. Americanus.	New Jersey Tea, or Red Root.
Hippocastana- ceae.	Aesculus.	Al. Glabra. Flava. Pavia.	Ohio Buckeye. Sweet Buckeye. Red Buckeye.
Aceraceae, (the <i>Maple Fam-ily.</i>)	Acer.	A. Pennsylvanica Saccharinum. Nigrum.	Striped Maple. Sugar Maple. Black Sugar Maple.
Polygalaceae, (<i>Milk Wort</i> Family.)	Polygala.	P. Senega. Sanguinea. Paucifolia. Rubella.	Seneca Snake Root. Flowering Wintergreen. Bitter Polygala.
Leguminaceae, (<i>Pulse Family.</i>)	Trifolium.	T. Arvense. Pratense. Repens.	Rabbit-Foot Clover. Red " White "
Rosaceae, (Rose Family.)	Prunus.	P. Americana. Maritima. Chicasa. Spinosa.	Wild Yellow or Red Plum? Beach Plum. Chickasaw Plum. Sloe—Black Thorn.
	Cerasus.	C. Pumila. Pennsylv'nica	Dwarf Cherry. Wild Red Cherry.

ORDER.	GENERA.	SPECIES.	POPULAR NAMES.
Rosaceae, (<i>Rose Family.</i>)	Spiraea.	C. Virginiana.	Choke Cherry.
		Serotina.	Wild Black Cherry.
		S. Opulifolia.	Nine Bark.
		Corymbosa.	
		Salicifolia.	Meadow Sweet.
		Tomentosa.	Hardhack.
	Agrimonia.	Lobata.	Queen of the Prairie.
		A. Eupatoria.	Common Agrimony.
		G. Rivalc.	Water or Purple Avens.
	Potentilla.	P. Norvegica.	Cinquefoil.
		Canadensis.	Five Finger.
		Argentea, &c.	
Calycanthaceae, (<i>Carolina Allspice Family.</i>)	Fragaria.	N. Virginiana.	Strawberry.
	Rubus.	R. Odoratus.	Purple Flowering Raspberry.
		Villosus.	High Blackberry.
		Canadensis, &c.	Dewberry.
		Trivialis.	Low-bush Blackberry.
Umbelliferae, (<i>Parsley Family.</i>)	Calycanthus.	C. Floridus.	Carolina Allspice.
		Lævigatus.	Sweet-scented Shrub.
		Glaucus.	
	Sanicula.	S. Canadensis.	Sanicle—Black Snake Root.
		Marylandica.	" " " "
	Eryngium.	E. Aquaticum.	Button Snake Root.
		Foetidum.	Fever Weed.
	Angelica.	A. Curtisii.	Angelica.
	Archangelica.	Hirsuta.	Archangelica.
		Atropurpurea.	Great Angelica.
		Peregrina.	
Cornaceae, (<i>Dogwood Family.</i>)	Cornus.	C. Florida.	Flowering Dogwood.
		Circinata.	Round-leaved Cornel.
		Sericea.	Silky Cornel.
		Stolonifera.	Red Osier Dogwood.
Cinchonaceae, (<i>Cinchona Family.</i>)	Cephalanthus.	Occidentalis.	Button Bush.
	Chiococca.	Racemosa.	Snow Berry.
	Pinckneya.	Pubens.	Fever Tree—Bitter Bark.
Hamamelaceae, (<i>Witch Hazel Family.</i>)	Hamamelis.	H. Virginica.	Witch Hazel.
Compositae, (<i>Composite Family.</i>)	Eupatorium.	E. Purpureum.	Joe Pye Weed—Trumpet
		Perfoliatum.	Thorough Wort—Boneset.
		Teucrifolium.	Wild Horehound.
		Ageritoides.	White Snake Root.
		Canadense.	Canada Flea Bane.
		S. Odora.	Sweet Golden Rod.
	Erigeron.	H. Autumnale.	Sneeze Wort.
	Solidago.	M. Cotula.	May Weed.
	Helenium.	A. Millefolia.	Yarrow.
	Maruta.*	C. Benedictus.	Blessed Thistle.
	Achillea.		
	Cnicus*		

* Introduced from Europe.

ORDER.	GENERA.	SPECIES.	POPULAR NAMES.
Compositae, (<i>Composite Family.</i>)	Hieracium.	H. Venosum.	Hawk Weed.
	Nabalis.	N. Fraseri.	Gall of the Earth.
	Tanacetum.	T. Huronensis.	Native Tansy.
	Artemesia.	A. Caudata.	Slender Wormwood.
		Ludoviciana.	Western Mugwort.
		Vulgaris.	Common " (exotic).
		Biennis.	Biennial "
	Senecio.	S. Aureus.	Life Root—False Valerian.
	Arnica.	A. Mollis.	Soft Arnica.
	Onopordon.*	Nudicaulis.	Cotton Thistle.
Ericaceae, (<i>Heath Family.</i>)	Arctostaphylos	A. Uva Ursi.	Bearberry.
		Alpina.	Alpine Bearberry.
	Epigæa.	E. Repens.	Trailing Arbutus.
	Gaultheria.	G. Procumbens.	Creeping Wintergreen.
	Ilex.	I. Opaca.	Deerberry.
	Vaccinium.	V. Stamineum.	Labrador Tea.
	Ledum.	L. Latifolium.	Round-leaved Pyrola—Win-
	Pyrola.	P. Rotundifolia.	One-flowered " [tergreen.
		Uniflora.	Prince's Pine.
	Chimaphila.	C. Umbellata.	Spotted Wintergreen.
Aquifoliaceae, (<i>Holly Family.</i>)		Maculata.	Indian Pipe.
	Monotropa.	M. Uniflora.	
	Ilex.	I. Opaca.	American Holly.
		Canadensis.	Canadian "
	Prinos.	P. Verticillatus.	Black Alder.
		Laevigatus.	Smooth Winterberry.
		Glaber.	Inkberry.
	Diospyros.	D. Virginiana.	Persimmon.
Ebenaceae, (<i>Ebony Family.</i>)	Statice.	S. Limonium.	Marsh Rosemary.
	Plumbagineae, (<i>Lead Wort Family.</i>)		
	Orobanchaceae, (<i>Broom-Rape Family.</i>)		
	Epiphegus.	E. Virginiana.	Beech Drops—Cancer Root.
	Orobanche.	O. Americana.	Squaw Root.
	Scrophulariaceae (<i>Fig Wort Family.</i>)		
	Chelone.	C. Glabra.	Snake Head.
Labiatae, (Mint Family.)	Mentha.	M. Canadensis.	Wild Mint.
	Lycopus.	L. Virginicus.	Bugle Weed.
	Cunila.	C. Mariana.	Common Ditany.
	Hyssopus.*	H. Officinalis.	Hyssop.
	Pycnanthemum.	P. Aristatum.	Mountain Mint.
		Incanum.	Wild Basil.
	Monarda.	M. Didyma.	Oswego Tea.
		Fistulosa.	Wild Bergamot.
		Punctata.	Horse Mint.
	Hedeoma.	H. Pulegioides.	Penny Royal.

* Exotic.

ORDER.	GENERA.	SPECIES.	POPULAR NAMES.
Labiateæ, (<i>Mint Family.</i>)	Collinsonia.	C. Canadensis.	Rich Weed.
	Salvia.	S. Lyrata.	Lyre-leaved Sage.
		Verticifolia.	Nettle-leaved "
	Scutellaria.	Lateriflora.	Mad Dog Scullcap.
		Nervosa.	Scullcap.
Gentianaceæ, (<i>Gentian Family.</i>)	Sabbatia.	S. Angularis.	American Centaury.
	Frasera.	F. Caroliniensis.	" Columbo.
	Gentiana.	G. Quinqueflora.	Five-flowered Gentian.
		Crinita.	Fringed "
		Detonsa.	Smaller Fringed "
		Alba.	Whitish "
		Saponaria.	Soapwort "
	Menyanthes.	M. Trifoliata.	Buck Bean.
		[ilium.	
Apocynaceæ, (<i>Dog Bone Family.</i>)	Apocynum.	A. Androsæmifo-	Spreading Dog-Bane.
		Cannabinum.	Indian Hemp.
Aristol'chiaceæ (<i>Birth Wort Family.</i>)	Asarum.	A. Canadense.	Wild Ginger.
	Aristolochia.	Serpentaria.	Virginia Snake Root.
	Polygonum.	P. Hydropiper.	Smart Weed.
Lauraceæ, (<i>Laurel Family.</i>)	Sass'fras. (Lau-	S. Officinale.	Sassafras.
	Benzoin. [rus.)	R. Odoriferum.	Spice Bark.
Juglandaceæ, (<i>Walnut Family.</i>)	Carya.	C. Alba.	Shag-Bark Hickory.
		Glabra.	Pig-Nut "
		Amara.	Swamp "
Cupuliferæ, (<i>Oak Family.</i>)	Quercus.	Q. Alba.	White Oak.
		Tinctoria.	Black "
Myricaceæ, (<i>Sweet Gale Family.</i>)	Myrica.	M. Gale.	Sweet Gale.
		Cerifera.	Bayberry.
Betulaceæ, (<i>Birch Family.</i>)	Comptonia.	C. Asplenifolia.	Sweet Fern.
	Alnus.	A. Serrulata.	Smooth Alder.
Salicaceæ, (<i>Willow Family.</i>)		Incana.	Speckled "
	Salix.*	S. Candida.	Hoary Willow.
		Tristis.	Dwarf Gray Willow.
		Humilis.	Low-bush "
		Discolor.	Glaucous "
		Sericea.	Silky-leaved "
		Cordata.	Heart-leaved "
		Angustata, &c.	Narrow-leaved "
	Populus.	P. Tremuloides.	American Aspen.
		Balsamifera.	Balsam Poplar.
Coniferae, (<i>Pine Family.</i>)	Pinus.	P. Resinosa.	Red Pine.
		Mitis.	Yellow Pine.
		Rigida.	Pitch Pine.
		Strobus.	White Pine, &c.
	Abies.	A. Balsamea.	Balsam Fir.
		Canadensis.	Hemlock Spruce.

* We have twenty-two distinct species of Willow, all possessing tonic properties.

ORDER.	GENERA.	SPECIES.	POPULAR NAMES.
Coniferae, (Pine Family.)	Juniperus.	A. Nigra. Alba. J. Communis. Virginiana.	Black Spruce. White " Common Juniper. Red Cedar.
Araliaceae, (Arum Family.)	Acorus.	A. Calamus.	Sweet Flag.
Orchidaceae, (Orchis Family.)	Orchis. Cypripedium.	O. Spectabile. C. Pubescens. Spectabile.	Showy Orchis. Yellow Ladies' Slipper. Showy "
Amoryllidaceae (Amoryllis Family.)	Aletris.	A. Farinosa. Aurea.	Star Grass.
Smilacaceae, (Smilax Family.)	Smilax.	S. Sarsaparilla. Rotundifolia.	Green Briar.
Trilliaceae.	Trillium.	T. Cernuum. Erectum.	Wake Robin. Birth Root.

Balsam of Copaiba.

COPAIFERA OFFICINALIS.

(And Other Species.)

THE various and extended uses of Copaiba, medicinally, render it a very important article with the medical profession—so much so, that I have considered a few words not amiss relative to its falsification and tests, as well as a consideration of the processes pursued for presenting it in convenient and desirable forms for administration.

Copaiba of commerce presents a considerable variety of appearances, as may be naturally expected from the great variety of its botanical sources; and it is not within the limits of this article to enter into a full description of each. It is often found in the shops, badly adulterated, to the extent of hardly containing ten per cent of Copaiba. Balsam of Copaiba, according to Pereira, is a clear, transparent liquid, having, for the most part, the consistence of olive oil. By age it becomes considerably denser, from the loss of volatile oil. It is insoluble in water; completely soluble in alcohol, ether, and the fixed and volatile oils; is solidified by about one-sixteenth of its weight of fresh calcined magne-

sia, and by alkalies it yields a kind of soap insoluble in water.

Considerable variation consists in the color, odor, taste, consistence, and specific gravity, as well as in the relative quantities of volatile oil and resin yielded by different varieties of Balsam of Copaiba, depending upon the different species from which it is produced. Some varieties contain as high as eighty per cent of volatile oil, while others yield only thirty per cent, according to the circumstances of its collection, such as age, position, and season of collection.

As this is an article extensively used, it has necessarily become an object to substitute for it coarser or inferior articles, and likewise to adulterate it largely with foreign substances, as fixed oils, castor oil, oil of turpentine, poppy-seed oil, &c.; but, inasmuch as the article derived from many sources will vary in consistence, chemical character and composition, it is necessary that one should, before pronouncing the article adulterated, apply the most approved tests.

Various are the plans that have been proposed for ascertaining its purity. All appear to agree that when pure it is transparent, free of turpentine odor when heated, soluble in two parts of alcohol, and dissolves one-fourth of its weight of carbonate of magnesia with the aid of gentle heat, and continues translucent; otherwise, with alcohol, a turbid mixture results, from which the impurity slowly separates, and a small proportion of any fixed oil renders the product with carbonate of magnesia opaque.

Castor oil is one of the most common adulterations, which may be easily detected by mixing three parts of the Balsam with one part of sulphuric acid, and shaking with fifteen or twenty parts of alcohol of 36°. If the mixture separates, it indicates that the Balsam is adulterated with castor oil. This test will not detect less than one-ninth part of adulteration.

One part of potassa dissolved in two parts of water forms a clear solution with nine parts of pure Copaiba, and the liquid continues clear when moderately diluted with water or alcohol; but the presence of one-sixth part of fixed oil in the Copaiba occasions more or less opacity in the liquid, and half the quantity causes the precipitation of white flakes in a few hours.

Boiled with fifty times its weight of water, till the liquid is evaporated, if the Copaiba contains any fixed oil, the residue

will be more or less soft, according to the quantity present, otherwise it will be hard and brittle.

A drop of the Balsam placed on a piece of unsized paper, and heated until all the essential oil is expelled, forms a semi-transparent, well-defined spot; but if the Balsam has been adulterated with a fatty oil, it is surrounded by an oily areola.

Two and a half parts of Balsam shaken with one part of liquor of ammonia, sp. gr. 0.965, forms a mixture which becomes clear and transparent in a few moments, and may be heated at 212° Fah. without becoming opaque, if pure.

By agitating the suspected sample with a lye of caustic soda, and setting the mixture aside to repose, the Balsam, after a time, rises to the surface, and the fatty oil present, if any, forms a soapy, thick mass below.

Pure Copaiba may be adulterated with fifty per cent of a fat oil (castor nut or almond), without ceasing to give a clear solution with two parts of alcohol, but it combines badly with magnesia and ammonia. Excess of alcohol, however, separates the oil in all cases. The best test for detecting the fat oils is the use of pure alcohol to which some caustic potash has been added. Mr. Redwood is of the opinion that most of the proposed tests of the purity of Copaiba are liable to fallacy, and that the best measure of its activity is the quantity of volatile oil it affords by distillation. However true this may be, I have had no reason to abandon tests which exhibited the character of the adulteration, and with proper care, a little experience and observation, I think them as reliable as the average of tests for adulterations in other articles.

M. Guibourt, after many experiments with a great variety of specimens, came to the following conclusions:—

“1. A Copaiba which possesses the four properties:—*First*, of being entirely soluble in two parts of absolute alcohol; *second*, to form at the temperature of 60° Fah. a transparent mixture, with two-fifths of its weight of a strong solution of ammonia; *third*, to solidify with one-sixteenth of its weight of calcined magnesia; *fourth*, to produce a dry and brittle resin after prolonged ebullition, is a Balsam which is certainly pure; and those which present these four properties are to be preferred to all others.

“2. The last character is an indispensable complement to the three first, which alone are not sufficient to certify the purity of the Balsam. On the other hand, one or two of the first characters may be wanting, without necessarily involving the adulteration of the Balsam. When these characters are wanting, we must try to discover the presence of some foreign substance;

but unless we can prove its presence, we must not conclude that the Balsam has been adulterated—it may arise from some unknown properties in the variety of the tree from which it is produced.

"3. The characters drawn from the action of ammonia, and of calcined and carbonate of magnesia, and which have been regarded as the most certain means of detecting the adulteration of Copaiba by a fixed oil, are far from possessing that value which has been assigned to them. The soft state of the Resin of Copaiba, deprived of its volatile oil by boiling water, is a much more certain test of this falsification."

Copaiba is not always mixed or adulterated with a single article; sometimes two or more are added, and not unfrequently factitious or compounded articles are made up really containing not a trace of Copaiba.

The following are some of the numerous formulæ in use for adulteration :—

Balsam of Copaiba,.....	4 pounds.
Castor Oil,.....	3 "
Mix well.	

Balsam of Copaiba,.....	7 pounds.
Castor Oil,.....	4 "
Yellow Rosin,.....	2 "

Balsam of Copaiba,.....	One part.
Canada Balsam,.....	" "

Balsam of Copaiba,.....	One part.
Canada Balsam,.....	" "
Castor Oil or Nut Oil,.....	" "

Balsam of Copaiba,.....	7 pounds.
Nut Oil,.....	3 "
Yellow Rosin,.....	2 "
Canada Balsam,.....	1 "

FACTITIOUS COPAIBA.

Castor Oil,.....	7 quarts.
Copaiba Bottoms,.....	1 "

Mix warm, and filter through flannel.

Castor Oil,	1 gallon.
Yellow Rosin,.....	3 pounds.
Canada Balsam,.....	2 "
Oil of Juniper,.....	2 ounces.
Oil of Savine,.....	1 ounce.
Essence of Orange and Lemon, each.....	$\frac{1}{2}$ "
Powdered Benzoin,.....	1 "

Melt the Rosin with the Castor Oil and Benzoin, and when nearly cold add the essences.

Canada Balsam,	8 pounds.
Venice Turpentine,	1 "
Oils of Fennel, Juniper and Savine,	q. s.

Used chiefly to fill cheap capsules.

Copaiba has long been regarded as a specific in gonorrhœa, but the experience of practitioners is decidedly favorable to its value in other diseases of the mucous membrane. In medicinal doses Copaiba is stimulant, cathartic and diuretic. Therapeutically it possesses the property of diminishing excessive mucous discharges, and at one time was used with apparent success as a febrifuge in ague. This use seems to have been abandoned, and the principal purpose for which it is now employed is the treatment of mucous inflammations, as bronchitis and gonorrhœa. Its use in the latter extends from the commencement of the last century, and is still the most approved remedy in that disease.

There appear to be two methods of treatment by it—one not to exhibit it until the inflammatory symptoms have subsided, the other to give it at the very outset, to cut short or suppress the disease. Both systems have their advocates, and very clearly their propriety should be determined by the characteristics of the case presented.

The greater influence of Copaiba over the urethral than over other mucous membranes is explained by experiments, which sufficiently prove that the active principle of the Balsam is chiefly eliminated by the kidneys, and exerts a healing influence on the inflamed mucous membrane of the urethra, by coming directly in contact with it, dissolved in the urine, as this fluid is expelled from the bladder. Dr. Roquette relates some interesting experiments and cases, which strongly prove its local action. His observations and conclusions are confirmed by Marchal, Dallas, and others, that the injection of Balsam of Copaiba is the most efficacious mode of treating gonorrhœa. Mr. Dallas employed it in sixteen cases, using no internal remedy either in recent or old gonorrhœa, with complete success: using for the enema five drachms of Copaiba, yolk of one egg, one grain of gummy extract of opium, and seven ounces of water—used several times a day.

The experience of most practitioners sustains the statement of Ricord; and others, that Copaiba is less successful in the gonor-

rhoea of females than males, inasmuch as the disease is not confined to the mucous lining of the urethra, (on which the influence of Copaiba dissolved in the urine is principally exercised,) but extends to that of the vagina. This adds (if further proof were needed) additional evidence of its therapeutical influence locally, and suggests the local treatment by injection of such cases, as well as by the internal administration of the article.

In chronic inflammation of the bladder, and in catarrh of the same organ, it has been highly recommended by Dr. La Roche, of Philadelphia. In leucorrhœa it has been employed with advantage, and its employment in *chronic pulmonary catarrh* has been favorably spoken of by Drs. La Roche, Armstrong, and others; and Pereira refers favorably to its use in chronic inflammation of the mucous membrane of the bowels, especially of the colon and rectum, and that Dr. Cullen spoke favorably of its use in hemorrhoids, and says:—"Having learned from an empirical practitioner that it gives relief in hemorrhoidal affections, I have frequently employed it with success." Dr. Ruschenberger recommends it locally in chilblains.

The nauseous taste and unpleasant effects of Copaiba, employed in the natural state, has suggested various methods of preparation, as solidification by magnesia, saponification by soda, and by enveloping it in capsules.

COPAIBA SOLIDIFIED is directed to be made by incorporating one drachm of calcined magnesia with two ounces of Copaiba, or one-sixteenth of its weight. To obtain a solid mass the Copaiba must be thick and resinoid, and the magnesia recently calcined. The introduction of wax in considerable quantity, to give it the consistence required, should not be allowed. In this form it is made into dragees, or oblong, oval pills, which are coated with sugar, and form one of the most convenient and eligible forms of administration.

COPAIBA SAPONIFIED is produced by a combination of soda and potash with the oleo-resin of pure Copaiba. Thus solidified or saponified it is digestible and readily assimilable, and is said to produce no nausea, vomiting, or gastric suffering, which occasionally occur with Copaiba in the natural state.

COPAIBA AND RHATANY.—In some instances, and particularly in cases of gonorrhœa and gleet, it is indispensable to associate

with it powerful auxiliaries, as cubebs or rhatany. By its tonic and astringent qualities the rhatany moderates its stimulant action on the intestines, and renders it less purgative; contributes powerfully to the cure of chronic affections, by fortifying the mucous membrane of the urethra, the atony of which is often the cause of persistent gleans. Ricord recommends the combination as much superior to Copaiba alone in the treatment of blenor-rhagia.

COPAIBA AND CITRATE OF IRON.—Especially adapted to complaints of females, whose peculiar affections require more particularly the use of ferruginous tonics.

COPAIBA AND CUBEBS.—Cubebs, when taken in large or frequent doses, generally diminishes the discharge, and remarkably relieves the other symptoms in a short time, but when employed alone the disorder returns after some time, especially if it be relinquished or the dose diminished. Cubebs should, therefore, be conjoined with Copaiba.

COPAIBA, CUBEBS AND RHATANY.—This combination is much esteemed, and recommended by some. The addition of rhatany renders the action of Copaiba less purgative, insures its more complete absorption into the system, and tends to allay hemorrhage from any part of the system.

COPAIBA, CUBEBS AND CITRATE OF IRON.—The combination with iron makes a valuable preparation for an endemic condition of the system, and consequently of great debility. It is valuable in chlorosis, leucorrhœa, &c., like all preparations of iron; gives force to broken down powers, and produces a favorable state of the blood: so much desired in the treatment of these diseases.

All these combinations are valuable, for their convenience and accuracy of preparation, as well as for the perfect manner in which they are enveloped in a coating of sugar.

I shall, at another time, refer more particularly to the therapeutical properties of Copaiba, and prepare an article on Cubebs, as this article is a powerful auxiliary to it, and one of the most useful remedies we possess in the same class of diseases, as well as in many others to which its use has not been sufficiently directed.

Remarks on Concentrated Preparations, Simple Tests, and Easy Method of Analysis.

JALAPIN.

JALAPIN is obtained from the root of *Ipomea Jalapa*, and is composed of two resins. Its color is gray. Is insoluble in water and the acids, except concentrated sulphuric; is soluble in alcohol, and is precipitated from its alcoholic solution by water. Of the two resins of which it is composed one only is soluble in ether. Its powder is exceedingly irritating to the nostrils and throat. It purges actively in three-grain doses, and possesses all the properties of the root.

It is often adulterated with guaiacum, resin and other substances, besides the substitution for pure resin of the alcoholic, hydro-alcoholic and aqueous extracts.

Properties of the Alcoholic Extract.—Color much darker than Jalapin; entirely soluble in alcohol and alkalies, and partially so in water. One hundred parts gave:—

Soluble in alcohol,.....	40.25
Soluble in water,.....	59.75
Total,.....	100.00

Properties of the Hydro-Alcoholic Extract.—Color darker than that of the alcoholic extract; partially soluble in alcohol, water and alkalies; soluble in proof spirit; attracts moisture from the air rapidly. One hundred parts gave:—

Soluble in alcohol,.....	29.61
Soluble in water,.....	70.39
Total,.....	100.00

Properties of the Aqueous Extract.—Color very dark; soluble in water and alkalies. The alcohol dissolves only a small portion which is not precipitated by water, showing the absence of any resin. Insoluble in ether; attracts moisture from the air.

CIMICIFUGIN.

Cimicifugin, or Macrotin, is obtained from the root of the *Cimicifuga Racemosa*, or Black Cohosh, and is a true resinoid. Not-

withstanding it has been asserted by some that Cimicifugin should represent an alkaloid, resin and neutral, all such preparation which I have examined are only hydro-alcoholic extracts, or are identical with the hydro-alcoholic extracts which I have prepared from the root, and submitted to the same analysis.

Properties of Cimicifugin.—Color light brown, with faint narcotic odor, slightly bitter and nauseous taste; insoluble in water and ether; soluble in alcohol, and alkalies, precipitated by acids from the alkaline solutions.

Properties of the Alcoholic Extract.—Color darker than Cimicifugin; soluble in alcohol and alkalies, and partially so in water. One hundred parts gave:—

Soluble in alcohol,	50.20
Soluble in water,	49.80
Total,	100.00

Properties of the Hydro-Alcoholic Extract.—Color much darker than the preceding; partially soluble in alcohol; soluble in diluted alcohol and in alkalies; absorbs moisture from the atmosphere rapidly, and cannot be reduced to a powder without the admixture of a foreign substance, as sugar of milk. One hundred parts gave:—

Soluble in alcohol,	35.24
Soluble in water,	64.76
Total,	100.00

Aqueous Extract.—Color very dark brown; soluble in water and alkalies; sparingly soluble in alcohol; water precipitates no resin from the portion soluble in alcohol; insoluble in ether; absorbs moisture rapidly, and requires an admixture of a foreign substance to reduce it to a powder.

CAULOPHYLLIN.

Caulophyllin is obtained from the root of *Caulophyllin Thalictroides*, or Blue Cohosh. The color is similar to Cimicifugin, with a greenish tint; odor strong and somewhat unpleasant; soluble in alkalies and alcohol, and insoluble in ether and acids.

The properties of the alcoholic, hydro-alcoholic and aqueous extracts are similar to those of Cimicifugin.

SANGUINARIN.

Sanguinarin is obtained from the root of *Sanguinarin Canadense*, or Blood-Root, and is a resinoid. The presence of four principles, as a resin, resinoid, alkaloid and neutral, are claimed by some writers; and with a view to ascertaining the accuracy of these views, we have examined several specimens. In some we found a resin and an alkaloid; but in the one claiming to present four distinct principles, in combination, we found the same characteristics as in the hydro-alcoholic extract.

Properties of Pure Sanguinarin.—Color deep redish brown; peculiar strong odor; bitter, nauseous taste, with rather a persistent sense of pungency in the fauces; insoluble in water; soluble in alcohol; partially soluble in alkalies, ether and acetic acid. When mixed with the alkaloid Sanguinarina, if treated with water slightly acidulated, the alkaloid will be dissolved.

Properties of the Alcoholic Extract.—Color very deep red; soluble in alcohol; partially soluble in water, alkalies, &c.; cannot be reduced to a powder without the admixture of a foreign substance. One hundred parts gave:—

Sanguinarin and Sanguinarina,.....	68.05
Soluble in water,.....	31.05
Total,.....	100.00

Properties of the Hydro-Alcoholic Extract.—Color dark; soluble in diluted alcohol; sparingly soluble in alcohol, and liberally so in water. One hundred parts gave:—

Sanguinarin and Sanguinarina,.....	48.50
Soluble in water,.....	51.50
Total,.....	100.00

Properties of the Aqueous Extract.—Color light brown; entirely soluble in water; sparingly so in alcohol.

SANGUINARINA.

Sanguinarina is prepared from the root of the same species. Pure Sanguinarina is a white or pearl gray (if not discolored by animal charcoal) body, having a bitter, somewhat acrimonious taste. Soluble in alcohol and ether; sparingly so in water; possesses well-marked alkaline characters; soluble in acids, and form-

ing red colored salts with them; by exposure to the air it assumes a yellowish tint.

HYDRASTINA.

Hydrastina is obtained from *Hydrastis Canadensis*, or Golden Seal. When pure it is in the form of a bright yellow powder, like chromate of lead, or in the form of crystals. It is entirely soluble in alcohol, water and alkaline solutions; is insoluble in ether, and possesses a very bitter taste. Its beautiful yellow color is of itself sufficient to distinguish it easily from the various extracts of Golden Seal.

Properties of the Alcoholic Extract.—Color of a brownish yellow, resembling the root in powder; soluble in alcohol; partially soluble in water, which dissolves the Hydrastina, leaving the oleo-resin. One hundred parts gave:—

Hydrastina,.....	80.25
Resin, &c.,.....	69.75
Total,.....	100.00

Properties of the Hydro-Alcoholic Extract.—Color and properties are the same as the alcoholic extract, and contains about the same per cent of Hydrastina, but less resin.

Properties of the Aqueous Extract.—Color is brighter than the preceding, and contains about the same per centage of Hydrastina, without any resin, but mixed with gum, starch and extractive matters.

The Cinchona Alkaloids and Their Salts.

QUINIA.

(From *Parish's Practical Pharmacy*.)

This alkaloid is prepared from various species of cinchona bark, which contain it in combination with kinic acid and the astringent principle called cincho-tannic acid. These combinations being only partially soluble in water, resort is had to an acid which liberates the alkaloid in a soluble form. That used in our official process for preparing the sulphate of quinia is muriatic, which is mixed with water in which the powdered bark is boiled. The very soluble muriate of quinia contained in this decoction is decomposed, giving up its acid to the lime, while the quinia is liberated, and, being insoluble, is precipitated with the excess of lime added, the water retaining the chloride of

calcium resulting from the reaction, and most of the impurities, in solution. The precipitated quinia and excess of lime being now digested in alcohol, the former is dissolved, and the impure quinia is obtained by evaporating this alcoholic solution. The remaining part of the process consists in converting this into the officinal sulphate, at the same time rendering it pure. To accomplish this, the amorphous mass is dissolved in diluted sulphuric acid, and filtered through bone-black, which contains sufficient carbonate of lime to neutralize the excess of sulphuric acid, and thus facilitate the crystallization of the sulphate as the solution cools. This process requires to be repeated, with the addition of acid, if the charcoal is too alkaline, till a white and pure product is the result.

The desire has been often expressed for a method to prepare this alkaloid without alcohol: the following is the process of Herring, who substitutes in place of it oil of turpentine or benzole:—

Powdered bark is boiled with caustic soda, to remove extractive, gum and coloring matter, exhausted with dilute sulphuric acid, evaporated at about 120°, filtered, precipitated by caustic soda, washed, re-dissolved in SO_3 , re-crystallized, treated with animal charcoal, and by fractional crystallizations purified from the other alkaloids.

The soda liquor is supersaturated with muriatic acid, evaporated, filtered, treated with hydrate of lime, from which precipitate the alkaloids may be extracted by oil of turpentine or benzole. On adding dilute SO_3 , a solution of the alkaloid is obtained to be puried as above.

Quinia occurs in silky needles, or in a crystalline powder, fusible at 194° to an electrical mass, soluble in about 400 parts of water, sixty parts ether, two parts alcohol or chloroform, twenty-four parts of olive oil, also in alkalies, carbonate of ammonia, chloride of calcium, &c. Its solution in concentrated nitric acid turns yellow by heat; the solution in sulphuric acid is colored only at a high temperature.

Its salts are mostly crystallizable; their solution show a blue fluorescence, which is rendered green on the addition of chlorine water, and subsequently ammonia—too much chlorine causes a brown color. A solution of quinia in diluted sulphuric acid, mixed with some acetic acid and alcohol, and heated to 180°, yields, after the addition of tincture of iodine, beautiful emerald green crystals of iodosulphate of quinia, which are nearly colorless by transmitted light. The solution of its salts is precipitated by alkalies, their carbonates and bicarbonates; but if they had been previously sufficiently acidulated with tartaric acid, bicarbonate of soda produces no precipitate. If their solution is treated first with chlorine water, free from hydrochloric acid, and subsequently with finely-powdered ferrocyanide of potassium, a red coloration is produced. Quinia salts are precipitated by ferrocyanide of potassium, the precipitate is dissolved on boiling and by an excess of the precipitant. (Differences from cinchonina.)

Quiniae Sulphas, (U. S.)—Of the salts, the neutral sulphate (formerly called disulphate) is mostly employed. Its mode of preparation has been given above. It is in feathery white crystals, much interlaced; of its eight equivalents of

water, six are given off by exposure to dry air, while the remaining two are driven off at 248° . It dissolves in 740 parts of cold and thirty parts hot water, in sixty parts of alcohol, but scarcely in ether. The addition of a mineral or of certain organic acids renders it easily soluble.

The salts of quinia are all used as tonics; the sulphate, especially, is a well-known antiperiodic and febrifuge. The dose varies from one to twenty grains. It is given in powder, pill, mixture, and solution. (See *Extern. Pharmacy.*)

The following unofficial salts are occasionally prescribed:—*

Quinia Murias.—The Dublin Pharmacopœia orders 437 grains of crystallized sulphate of quinia (equivalent to 382 grains of the salt dried at 212°) dissolved in thirty ounces of boiling water, to be precipitated by 123 grains of chloride of barium, and the filtrate evaporated until a pellicle forms. It crystallizes with 8HO in needles of a pearly lustre, more soluble than the sulphate. Baryta is detected by sulphuric acid, sulphate of quinia by chloride of barium.

Quinia Hydriodas.—Five parts of effloresced sulphate of quinia dissolved in alcohol, and decomposed by an alcoholic solution of three parts of iodide of potassium, precipitates sulphate of potassa, and yields, on cooling and evaporating, hydriodate of quinia in fine crystalline needles.

Quinia Antimonias is precipitated by double decomposition of antimoniate of potassa and sulphate of quinia, and crystallized from hot water or alcohol. It has been administered in periodical diseases in doses of from six to ten grains during apyrexia, and it is stated to be rarely necessary to give it a second time.

Quinia Arsenias.—Quinia is precipitated from 100 parts of its sulphate, dissolved in 600 parts alcohol, and boiled with fourteen parts arsenious acid; the filtrate, on cooling, separates needles of this poisonous salt. It may be given with caution in doses from one-quarter to one-half a grain several times a day.

Quinia Lactas is obtained by saturating lactic acid with quinia, or by double decomposition of the baryta salt of the former with the sulphate of the latter, and crystallizes in soluble needles.

Quinia Tartras is crystallized in needles from the hot solution of quinia in tartaric acid.

Quinia Citras is separated in needles from the hot mixture of citrate of soda added to sulphate of quinia until an acid reaction is shown to test paper.

Quinia et Ferri Citras.—Dr. Squibb saturates 330 grains of citric acid with freshly-precipitated sesquioxide of iron in a warm place; to this is added in the cold the quinia from seventy-eight grains of effloresced sulphate, and, after solution, dried by spontaneous evaporation (*Am. Jour. Ph.*, xxvii. 294.) It is stated to crystallize in greenish scales by saturating a hot solution of citrate of the sesquioxide of iron with quinia. As usually met with, it differs little in appearance from the garnet-colored scales of citrate of iron, and varies very much in composition. The usual dose is from two to five grains, in pill.

Quinia Acetas.—Seventeen parts of the effloresced sulphate of quinia is

* See Phosphorous Compounds for *Quinia Phosphas* and *Quinia Hypophosphas*.

dissolved in boiling water and mixed with six parts of crystallized acetate of soda; acetate of quinia crystallizes in white feathery needles, nearly insoluble in cold water. (See remarks in *Am. Jour. Ph.*, xxx. 385.)

Quinia Valerianas is officinal in the Dublin *Pharmacopœia*, which prepares it by double decomposition between muriate of quinia and valerianate of soda. It is also obtained by dissolving freshly-precipitated quinia in diluted valerianic acid, heating to near the boiling point, and crystallizing by cooling; the mother liquors are evaporated below 125°. It combines the tonic properties of quinia with the antispasmodic effects of the valerianates.

Quinia Tannas.—Tannic acid precipitates tannate of quinia from all solutions which have not been too much acidulated; it has little taste on account of its solubility in neutral liquids.

Quinia Gallas is obtained by double decomposition between a hot solution of sulphate of quinia and gallate of potassa. It is in crystalline granules, or a white powder, almost insoluble in water, soluble in alcohol and dilute acids.

Quinia Kinas.—To obtain this neutral salt directly from the bark, the following process is given by Henry and Plisson:—The extract is dissolved in three parts of water, nearly neutralized by carbonate of lime, then cautiously neutralized by hydrated oxide of lead; from the filtrate the lead is removed by sulphuretted hydrogen, after which the evaporated liquid is treated with alcohol of 0.842, the alcohol distilled off and the residue repeatedly treated with water and alcohol until nothing is separated by these liquids. It is obtained in white crystalline warts, soluble in four parts of water and eight parts of alcohol.

Quinia Hydroferrocyanas.—One part sulphate of quinia, one and a half parts ferrocyanuret of potassium, and seven parts of boiling water yield the salt on cooling, which is to be recrystallized from alcohol. It appears in greenish-yellow needles, which are insoluble in water. Pelouze asserts it to be quinia mixed with some Prussian blue. Dollfuss found it to be $C_{40}H_{24}N_2O_4 + 2(FeCy + 2HCy) + 6HO$.

[TO BE CONTINUED.]

Rational Treatment of Disease.

The following propositions form the conclusion of a long paper read by M. Piorry before the French Imperial Academy of Medicine, in May and June last:—

1. The treatment of disease is founded, almost entirely, on our knowledge of anatomy and physiology, aided by physical and chemical facts, and matured by clinical observation.
2. Positive therapeutics can only be established upon such knowledge as shall enable us to appreciate the causes, the development, and the effects of lesions which have been previously verified by a rigorously exact diagnosis.
3. Rationalism, which ever since Descartes, has been the method followed by genuine observers, must be the foundation of medicine, as it is of the other

natural sciences.

4. Before seeking new remedies for a disease we must learn to define exactly the existing organic and physiologic condition of the system, and carefully study the effects of known medicaments and hygienic agents upon this condition.

5. By far the greater part of the progress of therapeutics is due to medical rationalism guided by exactness of diagnosis.

6. Specific medicines—that is, those which are applied to an unknown cause of disease, and which are only discovered by accident—are very few, and ought only to be adopted in practice when they are indicated by rationalism and the most positive diagnosis.

7. Some physicians err in censuring rational medicine (from which results a system of therapeutics characterized by good sense), in order to extol the treatment by specifics, which has no other foundation than accident, and is only supported by the fancy and credulity of an ignorant public, who are the enemies of science, and who are easily seduced by the marvels of mysticism, and by deceitful promises.—*Boston Med. and Surg. Journal.*

Therapeutic Properties of Belladonna.

By M. Dubois.

[We reproduce with pleasure the following conclusions, at which the author arrives in a prize essay on this subject, for we believe that the remedy which he extols is underrated by the profession in this country. Trousseau, in the best book on therapeutics that has ever been written, places belladonna in the same rank with calomel, opium and iodine, and the opinion of such a man alone should induce physicians to make a faithful trial of the remedy. We feel confident that those who do so will not be disappointed in the result.]—*Virginia Med. and Surg. Journal.*

1. That belladonna is not without efficacy in some phlegmasiæ, especially in those of the globe of the eye;

2. That it is the best remedy known in the photophobia which so frequently accompanies inflammations of the eye;

3. That its power as a prophylactic in scarlatina can hardly be contested;

4. That it sometimes cures certain hemorrhages, such as hæmoptysis, hæmatemesis and metrorrhagia;

5. That it is the remedy *par excellence* for neuralgia, for whooping cough, and most of the neuroses;

6. That it is the remedy *par excellence* to combat pain, especially when external;

7. That it alleviates more than any other remedy the pains of cancer, and cures sometimes, if not cancer, diseases closely resembling it;

8. That it can be advantageously employed in spasmodic contraction and occlusion of the pupil; to reduce procidentia of the iris and to break up adhe-

sions; to prevent the inflammation of the iris so frequent after this operation; to maintain dilation of the pupil, and to diminish the chances of adhesions after the operation of couching; to prevent secondary cataract; to reëstablish vision temporary at least, when the lens is opaque in the centre, or when there are opacities of the cornea; to assist the diagnosis in some diseases of the eye;

9. That it is of real efficacy in some cases of strangulated hernia;

10. That its property of facilitating labor in spasmodic constriction of the uterine neck is powerful and incontestible.

11. That it produces advantageous results in some cases of fissure of the anus;

12. That its employment may be more or less useful in spasmodic contraction of the bowels, in constipation, in spasmodic constriction of the rectum, of the anus, and of the vulva; in phimosis and paraphimosis, spasmodic stricture of the urethra, retention of urine, strangury, spasmodic stricture of the larynx and œsophagus; in blepharospasm, incontinence of urine, nephretic colic, hemorrhoids, &c.

13. Finally, that belladonna should be placed in the first rank of medicinal substances.—*Bulletin of the Medical Society of Gand*,—(*Gazette Médicale*.)

Glycerine Ointment for the Itch.

M. Bourguignon, so well known in Paris by his successful researches on "the acarus scabiei," has published in the *Gazette Médicale* the following formula. One general friction, not preceded by soap ablutions, is sufficient:—Yelks of two eggs; essence of lavender, lemon, and mint, of each 120 drops; gum tragacanth, half a drachm; well-pounded sulphur, twenty-six drachms; glycerine, thirty-two drachms. Total weight, nearly eleven ounces. Mix the essence with the yolk of egg, add the gum tragacanth, make a good mucilage, and then add very gradually the glycerine and sulphur. Many cures have been obtained by this preparation, which has the advantage of giving no pain. The well-known Helmeric ointment being really useful, M. Bourguignon has modified it, and substituted glycerine for the axunge. In the altered form the preparation is not any dearer, as efficacious, and less painful than the original ointment. It does not grease the clothes, and has an agreeable perfume:—Gum tragacanth, fifteen grains; carbonate of potash, thirteen drachms; well-pounded sulphur, twenty-six drachms; glycerine, fifty-two drachms; essences of lavender, lemon, mint, cloves, and cinnamon, of each fifteen drops. Total weight, eleven ounces. Make a mucilage with the gum and one ounce of glycerine, add the carbonate, mix until it is dissolved, and then gradually add the sulphur and glycerine; lastly, pour in the essences. With this compound, M. Bourguignon advises two general frictions of half an hour, within twelve hours of each other, and followed, twenty-four hours afterwards, by a simple warm bath, as the glycerine is soluble in water. Two-thirds of the preparation should be used for the first friction, the other third for the second.—*London Pharm. Journal*, from *Lancet*.

Belladonna in Preventing the Secretion of Milk, and in Mammary Abscess.

(Read before the Aurora City Medical Association, at Aurora, Ill., Oct. 8, 1869.)

By A. Hard, M. D.

There has been much said of late of the virtues of belladonna in preventing and arresting the secretion of milk; and having, with others, labored under the inconvenience of possessing no reliable remedy to fulfill such indications, I resolved to test its virtues, and I propose to give the result of its use in six cases, in which I have endeavored to give it a fair trial.

In the first three it was desirable to prevent the secretion of milk in one breast (from the entire want of development of the nipple) without interfering with the other. All three patients had previously suffered from mammary abscesses, and they looked forward to their approaching *accouchement* with "fear and trembling." Immediately after delivery, I ordered the following:—

R.—Extract of belladonna,..... ℥ ij.
Aqua font.,..... ʒ ij.
Misce.

With this solution bathe the *one* breast every four hours, until the flow of milk is established in the other; then apply less frequently, but continue its use a week longer.

In one patient there was no milk secreted in the breast thus treated, while the other breast afforded the usual amount and appeared unaffected. In the other two cases there was a little milk secreted, but not sufficient to distend the gland so as to produce inconvenience, while the opposite breasts, like that of the first case, performed their functions unimpaired. The fourth was a case of premature delivery at the sixth month, as the result of *placenta prævia*. The solution of belladonna was applied to both breasts. But little milk was secreted, which was soon absorbed.

The fifth was a case of abortion. The belladonna was not applied until the breasts became distended and painful. I ordered that the milk be drawn with a breast pump once, then applied the belladonna, and had no further trouble.

In the last case a large abscess had formed in one breast, which was discharging, and extensive swelling and inflammation existed in the other, at the time I was called. The patient had been a great sufferer for four weeks, both from the "cold water treatment" and the mammary inflammation. I applied the belladonna, as in the other cases, also warm fomentations, had the bowels moved by sulphate of magnesia, and ordered the following:—

R.—Sulph. quinine,..... 15 grains.
Pulv. opii,..... 2 "
Misce.

Div. in chart. No. 4. Dose, one every three hours.

Under this treatment suppuration was prevented, the inflammation was subdued, and convalescence soon followed. There was but little constitutional

effect of belladonna perceptible. In two cases the pupils of the eyes were a little dilated: the children were not effected by it. However, I took the precaution to guard against its inhalation either by the mother or child.

If belladonna proves as useful in the hands of others as it has in mine, in these unpleasant complications consequent upon child-bearing, a vast amount of pain and suffering will be mitigated, if not entirely prevented. I would call the attention of the Association particularly to its application to one breast, leaving the other undisturbed.—*Chicago Medical Journal*, November, 1859.

A New Disinfectant for Dressing Putrid Sores and Ulcers.

Considerable discussion has recently taken place in the French Academy, respecting a new preparation, introduced by MM. Demeaux and Corne, for dressing and disinfecting putrid sores and ulcers. It consists of a mixture of one hundred parts of commercial plaster of Paris in a very fine powder, and from one to three parts of coal tar. This mixture forms a powder of a more or less grayish color, and a slightly bituminous odor. For application, it may also be made into a paste with olive oil, which binds the powder together without destroying its absorptive power. The following are the properties of this substance, as described by the above gentlemen:—A gangrenous sore, with an abundant fetid suppuration, treated with this dressing, is immediately freed from all disagreeable odor, and the bandages, even after twenty-four or thirty-six hours, exhale no more odor than if taken from a simple fracture. An ulcerated cancer, producing a fetid, serous suppuration, dressed with this substance, is entirely deprived of odor as long as the dressing remains on. So also the linen saturated with pus, cataplasms impregnated with the suppuration, &c., placed in contact with this substance lose all their disagreeable odor; the infectious liquid produced by gangrene, clots of decomposed blood, tissues in a state of advanced putrefaction, treated with this substance are immediately disinfected. Its action appears to be to arrest the work of decomposition; it removes the insects, and prevents the production of maggots. The consistence acquired, either by the powder alone or the paste with oil, does not cause the least pain to the patient or harm to the sore. Its application may be indirect or direct; the latter produces no harm, but rather exercises a detersive action favorable to cicatrization. This dressing has the double power of disinfecting the pus and other morbid products, and of absorbing them; the last circumstance is of the greatest importance, because it enables the use of lint to be dispensed with. Fifty kilogrammes of this powder may be made in Paris for one franc. M. Yelpeau, at the Hôpital de la Charité, and several other French surgeons, have employed this preparation with great success, and speak very highly of its disinfecting properties. Mr. Crace Calvert, of Manchester, has addressed a letter to the French Academy, in reference to this subject, pointing out the great variation which exists in

the composition of coal tar, and the consequent necessity for more accurately ascertaining to which of the constituents the disinfecting properties are really due, in order to insure the uniform action of the preparation. From the results of his own experiments he considers that the antiseptic properties of the tar are entirely due to the carbolic acid present. He states that a corpse injected with a weak solution of this acid was preserved from decomposition for several weeks, and that a piece of flesh steeped in carbolic acid was exposed to the air for three years without change. He also states that a small quantity added to urine will preserve it from decomposition for some weeks, and that it is also capable of preventing the gallic fermentation from taking place in the solutions of tanning substances.—*London Pharm. Journal, and Philadelphia Journal of Pharmacy.*

Warren's Hæmostatic.

A correspondent requests us to publish the formula for Warren's hæmostatic, or *styptic balsam*, as it is very improperly called. This preparation has been highly recommended in hæmoptysis, hæmatenesis, epistaxis, and menorrhagia.

It is said to act by its sedative power in diminishing the force of the circulation, and by its astringent qualities in contact with the bleeding vessels.

The formula, and its mode of preparation, is as follows:—

℞.—Acid. sulph. (by weight), 3 v.
 Ol. terebinth,
 Sp. vini rect. aa., f. ʒ ij.

Place the acid in a wedgewood mortar, and the turpentine slowly, stirring it constantly with the pestle; then add the alcohol in the same manner, and continue stirring it until no more fumes arise, when it may be bottled, and should be stopped with a ground stopper.

It should be prepared from the purest materials, and when done it should exhibit a dark but clear red color like dark blood; but if it be a pale, dirty red, it will be unfit for use. The dose is forty drops, and the method of using it is as follows:—

Put a teaspoonful of brown sugar in a common sized tea-cup, and rub in forty drops of the preparation until it is thoroughly incorporated, and then slowly stir in water until the cup is nearly full, when it should be immediately swallowed. This dose may be repeated at intervals of an hour, until three or four doses are taken, if necessary, and its use should be discontinued when fresh blood ceases to flow.

After standing a few days a pellicle forms upon the surface, which should be broken, and the liquid below it used. It does not deteriorate by age, if tightly stopped.—*Philadelphia Medical and Surgical Reporter, December 10, 1859.*

Selections.

THE EMPIRICAL TREATMENT OF PHTHISIS.—The *Lancet* says:—"Dr. Watson remarks, with great propriety, in his excellent lectures, that the more intractable the disease the greater the number of remedies proposed. No one is surprised at the various modes of treating tuberculosis, which have been extolled, for it is quite natural that new weapons should be sought against an enemy who proves invulnerable by the old ones. But we protest against unnecessarily teasing and tormenting the unfortunate individuals whose lungs are being destroyed by tuberculous deposits, and whose organism is wasting under the effects of the local mischief and morbid diathesis. M. Beau, physician to the Paris Charité Hospital, for instance, proposes, and has practiced the following method:—'Give carbonate of lead in phthisis, because painters hardly ever suffer from the disease; and substitute one cachexia for the other.' Then we have a paper addressed by M. Aussandon to the Academy of Medicine of Paris, 'on the treatment of pulmonary consumption.' The author, who has noticed that bakers, and generally those who sleep in the day and watch at night, bear the symptoms of the latter stages of phthisis better than others, straightway advises to keep consumptive patients awake at night and send them to bed in the day time!"—*Philadelphia Med. and Surg. Reporter*.

SCARLATINA AND MEASLES.—Mr. Witt has just published a letter to Mr. Simon on the use of ammonia in scarlatina and measles. Mr. Witt looks upon the treatment by ammonia in these diseases as a specific, as much so as quinine in intermittents. The late Mr. Wilkinson stated that Dr. Peart had introduced the remedy, and did not lose one patient out of three hundred cases of scarlatina; and Mr. Wilkinson adds that for seventeen years he has never lost a patient from this disease, nor ever had a case that even appeared dangerous. Mr. Ricardo, who attended many large schools, had not lost a single patient, out of some hundreds, during twelve or fourteen years. The dose is from three to seven grains every hour for the first twenty-four hours, and every second hour for the next day. All acid drinks are carefully avoided. This is a matter of interest just now that the power of ammonia in retarding coagulation of the blood has been established, and it is curious as an illustration of the success attending opposite methods of treatment; for the use of acetic acid in the treatment of scarlatina has been gaining ground very rapidly of late, and the success which has followed its use has been very great.—*Medical Times and Gazette*.

EPILEPSY TREATED BY THE HYDROCYANATE OF IRON.—M. Fabre reports seven cases of confirmed and well-marked epilepsy, in which pills of this substance have operated cures. He alludes also to numerous cases in which it has been successfully employed by M. Roux, of Brignolles, and adduces the testimony of Dr. Dilasiauve, physician to the Bicêtre, and others, in support of the advantageous effects of this preparation. The hydrocyanate of iron has been successfully employed in chorea and other neuroses complicated with

chlorosis since 1829. It seems to exert a powerful influence over the uterine functions, and has succeeded in menstrual disorders after other ferruginous preparations had failed. We must refer those who desire further information on this subject to the article of M. Fabre.—*Révue de Malgaigne*, (March, 1853, p. 139.)

TANNATE OF QUINIA IN NOCTURNAL SWEATS.—M. Delioux, chief of the French naval surgeons, after numerous experiments with the different preparations of bark in the treatment of colliquative sweats, which occur during sleep in phthisis and other diseases, considers the tannate of quinia, introduced by Barreswil, the most appropriate remedy in this affection. This agent is supposed to be peculiarly applicable to two essential conditions in this symptom: organic debility and periodicity. M. Delioux cites many cases in support of his views. He administers this agent in two or three doses of six or eight grains during the afternoon. It is insipid, and causes neither wakefulness nor indigestion.—*L'Union Médicale*, No. 43.

CHROMIC ACID IN SYPHILITIC VEGETATIONS.—Mr. Hairon, after describing the advantages derivable from the chromic acid in certain forms of the granular eyelid, (a disease of common occurrence in the Belgian army,) observes that the trials he has made of the acid, as recommended by Marshall and Heller in syphilitic vegetation, have been attended with the most complete and rapid success. Moreover, its application, whether to these syphilitic vegetations or to the fungus granulations of the conjunctiva, is never attended with pain or reaction, notwithstanding the rapid destruction of tissue that takes place.—*Annales and Occulistique*.

TANNIN.—Introduction of tannin within the uterus is accomplished by means of crayons formed of tannin or gum tragacanth, one-sixth of an inch in diameter and an inch long. They are passed, by means of forceps and speculum, through the os uteri into the cavity of the uterus, in which they are kept by means of charpie, moistened with a concentrated solution of tannin. The crayon slowly softens and dissolves, when it is replaced by another. M. Becquerel recommends this treatment in hemorrhage and diseases of the mucous lining of the womb.—*Philadelphia Med. and Surg. Reporter*.

POISONING BY OPIUM OR BELLADONNA.—Opium and belladonna are mutually remedial, when either has entered the circulation in a poisonous dose. From this cause, if both be prescribed together, as with a view to lull cerebral excitement, the effect desired will not be produced, whilst if the other be given separately it will. In cases of poisoning by opium, give a solution of belladonna—say a drachm of the tincture every half hour, or, if it cannot be swallowed, inject it subcutaneously. Conversely, in a case of poisoning by belladonna, opium may be used. Several cases are recorded illustrating this subject.—*Braithwaite's Retrospect*.

IODATE OF POTASH.—The action of this salt is more powerful than that of the chlorate of the same base, and has, in our hands, yielded excellent results where the chlorate of potash had failed.—*Ibid*.

IODIDE OF CALCIUM.—This salt is very valuable in cases in which the iodide of potassium is inadmissible. It does not occasion idiosm, or resorption of the healthy tissues; it does not excite the circulation, nor irritate the stomach and bladder, by passing off too rapidly by the kidneys. Its solution in milk is perfectly tasteless. It is particularly useful in squamous diseases of the skin, and chronic and metallic poisoning by mercury, lead and copper.—*Braithwaite's Retrospect.*

HÆMOPTYSIS.—Recently, after a trial of many other agents, without avail, and the tincture of gelseminum alone giving only momentary relief, I found a mixture of it with tincture of veratrum viride, in doses of twenty-five drops of the gelseminum with twelve drops of veratrum viride, answered completely. I have also found the extract of rhatany, combined with gelseminum or veratrum viride, of value.—*Dr. Miller.*

ERYSIPELAS.—In some severe cases of erysipelas I gave of the tincture of veratrum viride six drops every three hours, and each morning a small dose of podophyllin. In some cases where the brain was affected I gave six grains of sulphate of quinia at a dose, once in eight hours, in conjunction with the veratrum.—*Ibid.*

PERTUSSIS—OXIDE OF ZINC.—In the latter stages of whooping cough I find the oxide of zinc, in connection with the sulphate of quinia, quite valuable. Small doses seem to act better than larger ones. Tannic acid is also frequently indicated.—*Ibid.*

CHALYBEATES.—Iron should never be given in the enormous doses advised by some. One, or at most two, grains at a dose, and repeated two or three times a day—and from four to eight days, with an intermission of a few days, and then its use recommenced, will do far better than its continuous use. Boerhave said:—"Give chalybeates in the most simple form, and we will have all we desire."—*Ibid.*

CHLOROFORM AS A NARCOTIC.—When opium is contra-indicated, or fails to act, in cases where it is desired to procure sleep, give thirty or forty minims of chloroform suspended in a little acacia mixture, or some other mucilaginous liquid. It generally succeeds in procuring for the patient two or three hours of tranquil sleep.—*Braithwaite's Retrospect.*

CHLORATE OF SODA.—Chlorate of soda is considerably more soluble than the corresponding potash salt; it may consequently be given in a much smaller quantity of vehicle, and moreover the taste is less disagreeable. It has been employed with uniform success in several cases of diphtheria.—*Ibid.*

DIGITALINE IN SPERMATORRHOEA.—Dr. Lucien Corvisart, a pupil of M. Chomel, reports three cases of obstinate nocturnal, and even diurnal, seminal losses, which were completely cured by the use of digitaline. We refer those who desire to learn the details of the treatment to Dr. Corvisart's paper.—*Bulletin de Thérapéutique.*

Pharmacy.

PROCESS FOR PREPARING IODIDE OF SODIUM.

By M. Cripekoven.

R.—Iodine,	12 parts.
Iron, in powder,	3 “
Distilled water,	32 “

After the iodide of iron is made by the ordinary process, pour into the liquid, unfiltered—

Iodine,	6 parts.
Caustic soda at 87°,	12 “
Mix by shaking well together, then add	
Caustic soda,	9 “

If the liquid contain an excess of iron, separate it by carbonate of soda. Try the solution with litmus paper, and if it manifest an alkaline reaction allow it to stand and settle; then filter and evaporate to dryness; dissolve in equal parts of distilled water, filter and evaporate.

ELECTUARY FOR INCONTINENCE OF URINE OF CHILDREN—
CHLOROSIS AND LEUCORRHEA.*By M. Crineaud.*

R.—Cannella, in powder,	375 grains.
Iron, in powder,	1000 “
Ergot,	140 “
Sugar,	} aa. 1000 “
Honey,	

Mix well. Take one grain of it morning and evening.—*Répertoire de Pharmacie.*

SYRUP OF COFFEE FOR WHOOPING COUGH.

By M. Delairaye.

R.—Coffee, in powder,	500 grains.
Boiling water,	q. s.
Obtain by displacement 1000 grains of the liquid.	
Alcoholic extract of belladonna,	10 grains.
“ “ ipecac.,	10 “
Sugar,	2000 “

Melt in a water bath, and filter. Dose, for children three to five years old, fifteen grains morning and noon, and double the quantity at evening, in two or three tea-spoons of hot water. For children of less age, half the quantity.—*Journal des Com. Med.*

TREATMENT OF SCARLATINOUS ANGINE BY IODINE.

R.—Iodide of potassium,.....	1 grain.
Iodine,.....	0.1 "
Chlorate of potassa,.....	4 grains.
Nitrate of ".....	6 "
Aqueous solution of potash,.....	4 "
Water,.....	240 "

Administer one or two teaspoonsful every four hours, according to age of the patient.—*Gazette Médicale de Lyon.*

RED DROPS.

By M. Leconte.

R.—Camomilla,.....	60 grains.
Opium,.....	8 "
Saffron,.....	2 "
Cannella,.....	1 "
Cloves,.....	1 "
Alcohol,.....	300 "

Macerate for eight days; express and filter. Dose, from five to 20 drops, several times a day, on sugar, in gastrology, diarrhoea, &c.—*Répertoire de Pharmacie.*

ALUMINOUS PASTILES.

By Dr. Argenti.

R.—Alum, gum, and sugar,.....	aa. Equal parts.
Water of laurel,.....	q. s.

Make into pastiles weighing four grains, and which contain from half to one grain of alum. Much used in ulcerations of the mouth.—*Bulletin Générale de Thérapeutique.*

METHOD OF DETERMINING EASILY AND EXACTLY THE QUANTITY OF IODINE IN ANY TINCTURE.

This method consists in the direct transformation of iodine in a given weight of tincture into iodide of zinc by a known weight of pure zinc, in excess, and determining afterwards by a simple calculation based on chemical equivalents; after having weighed the undissolved zinc, the quantity of iodine corresponding to the weight of zinc dissolved, and formed into iodide of zinc.—*Journal de Chimie Médicale.*

FORMULA FOR NEURALGIA.

Dr. Charles Mcbean, of Baltimore, recommends the following formula for that painful disease, neuralgia of the head and face:—

R.—Extract of belladonna,	4 grains.
Aq. ammonia,	6 fluid ounces.
Spirit terebinth,	½ “ “
Tincture opii,	2 “ “
Oil of olive,	½ “ “

Mix. Apply during the paroxysms.

OINTMENT FOR ACUTE INFLAMMATION OF THE TYMPANUM.

Dr. Kramer, whose excellent work on the special diseases of the ear is well known, extols the employment of the following ointment when inflammation of the tympanic membrane has not yielded to the action of antiphlogistics:—

Tartar emetic,	4 grms.
Simple cerate,	8 “
Oil,	8 “ M.

This ointment is used by friction over the mastoid process. This measure is intended to prevent the organic alterations which ordinarily take place at this period of the disease.

In case the affection has passed into the chronic state, and gives rise to a slight otorrhœa, mucous or purulent, M. Kramer recommends aiding the action of the antimoniated ointment by the employment of simple injection, and then with the solutions thus made:—

Water,	30 grms.
Sulphate of zinc or acetate of lead,	5 to 50 ctgrms.
Or nitrate of silver, or bichlor. of mercury, ..	1 to 5 “

When the membrane of the tympanum is perforated, he does not employ these injections except after blunting the sensibility of the mucous membrane of the tympanic cavity, by a tepid solution composed of—

Sulphate of potassa,	5 to 15 ctgrms.
Water,	30 grms.

The physician ought always to perform these little operations himself, with the end of suspending them if too great irritation supervenes.—*Bulletin de Thérapeutique, and Druggist.*

TREATMENT OF DYSPEPSIA.

Messrs. Editors:—In the course of a long practice in cases of indigestion, I have found the following prescription to have done good service:—

R.—Prepared carbonate of iron, calcium of magnesia, pulverized elm bark, each,	℥ i.
Pulverized cubebs,	℥ ss.
M.	

Take a teaspoonful, half an hour before eating, in half a teacupful of water — *Boston Med. and Surg. Journal.*

SYRUP OF PHOSPHATE OF IRON AND MANGANESE.

In the absence of any authorized formula for this syrup, and in answer to several correspondents, we insert the following:—

R.—Phosphate of iron,.....	72 grains.
Phosphate of manganese,.....	48 “
Glacial phosphoric acid,.....	3 vi.
Sugar,.....	℥ x.
Water, sufficient to make f.....	℥ xij.

Dissolve the phosphoric acid in a small quantity of the water, add the phosphates, and apply heat till dissolved, then add the sugar and the remainder of the water, so that the product may measure twelve fluid ounces.—*Pharmaceutical Journal*.

BROWN MIXTURE.

By Charles S. Tilyard.

Brown mixture, if prepared in the following manner, may prove more satisfactory than after the old method:—

R.—Pulverized extract of liquorice,.....	℥j.
Gum arabic, in lump,.....	℥j.
Paregoric,	fl. ℥ iv.
Ant. wine,	fl. ℥j.
Wine of ipecac,.....	fl. ℥j.
Sweet spirit of nitre,.....	fl. ℥j.
Cold water, ..	q. s.

Mix the paregoric, antimony wine, spirits nitre and wine of ipecac together, in a bottle holding one quart; turn in the pulverized extract of liquorice; set aside for twelve hours, with frequent agitation, then pour in gradually twenty fluid ounces of cold water; set aside again for twelve or twenty-four hours, frequently shaking. Filter through a *well-plaited* filter, allow the gum to dissolve in the liquid, and when dissolved pour it into a bottle containing one and a half pounds (avordupois) of white sugar in *coarse* powder; shake frequently until the sugar is dissolved, or hasten it by setting the bottle in warm water. The whole, when finished, should measure two pints.

The proportions, it will be observed, are the same as in the *Mistura Glycyrrhizæ Composita* of the U. S. D., with the exception of the sugar, also in substituting one ounce of wine of ipecac for one ounce of wine of antimony.

The result is a thin, transparent, dark syrup, retainining, it is believed, the virtue of its components.—*Jour. and Trans. of the Maryland College of Pharmacy*.

Editorial.

With this number commences the new year; we present our readers with its usual compliments, and with the hope this year may be to all a year of reciprocal relations. Having received from our readers and patrons very many flattering testimonials of appreciation and good will, we enter upon the new year with renewed hope of permanent success: the very numerous early renewals of subscription by our old subscribers are the most substantial assurances we could possibly have that our efforts to make the JOURNAL worthy of their support have not been in vain.

Our readers already understand the plan and character of the JOURNAL; but to such as have not read it, and who design to do so, we will say, that it is devoted exclusively to the subject of *materia medica*—giving to the profession desirable and valuable information of new facts and developments in the powers, properties and application of the various therapeutic agents now in use, and to the selection and concentration of what really tends to the advancement of science or may be found useful in the daily routine of practice.

We shall devote, largely, its pages to a consideration of those native plants which possess properties deserving the attention of medical practitioners; and with the botanical history of each will be given, in detail, the results of the chemical examination we shall have made of *its constituent parts*, together with its medical properties and uses, and facts relative to its operation on the human system, as are known from the observation or evidence of those qualified to form correct opinions upon the subject.

In connection with a general consideration of our indigenous *materia medica*, we are instituting an elaborate series of experiments concerning the *cultivation of narcotic plants*; the analysis of the foreign plant, of the cultivated plant; analysis of soils, plants grown upon particular soils, and by treatment with special manures—all of which will be given from time to time in detail, together with all circumstances connected with their growth and the formation of their peculiar principles.

We hope by these means to aid the investigation of many plants, and diffuse a knowledge concerning them which may prove highly useful, and to present to the profession a mass of information which the general body of medical practitioners cannot possibly obtain in any other way.

A FRENCH SPECIFIC FOR ASTHMA.—We see it announced that Dr. Courty, a professor of the Medical School of Montpellier, has discovered a cure for asthma. The remedy consists alone in the injection of the sulphate of atropine under the skin of the neck over the course of the pneumogastric nerve. The substance injected is an alkaloid made from the atropia belladonna, or deadly night-shade. Its narcotic and poisonous qualities are well known. In medical doses it acts powerfully in allaying pain and controlling irritability of the nervous system. The difficulty was, in asthma, to bring the substance into contact with the great nerve, or pair of nerves, which supply the principal

part of nervous filaments to the lungs. "Dr. Courty, it appears, did not hesitate to thrust a trocar and canula into the region of the nerve, and directly over it, and there to inject a few drops of the medicine, and leave it. The incision was made inside the sterno-cleido-mastoid muscle on a level with the thyroid cartilage, and directly over the sheath of the great vessel of the neck. The trocar was pushed in at first a distance of seven or eight millimetres only, from fear of wounding the important organs of this region. The quantity of liquid injected was six drops, containing about two milligrammes of the sulphate of atropine. This first injection relieved the patient, but not entirely, and was attended with the usual symptoms of large doses of belladonna. A second injection was made, four days afterwards, on the other side of the neck, and this time the trocar was inserted as deep again as on the first occasion. The trocar was then withdrawn, and the point of the canula 'promenaded' a little up and down in the cellular tissue, in order to diffuse the medicine over as large a surface of the covering of the great vessel as possible. The cure was rapid and permanent from that day."—*Exchange*.

VERATRUM VIRIDE.—The Illinois State Medical Society has issued a circular to the physicians of that State, with the following inquiries:—

- "1. Have you made use of *veratrum viride* in your practice? If you have:
- "2. In what form do you use it, (if the tincture, whose preparation?) and in what dose?
- "3. What are its effects?
- "4. In your opinion, what is its *modus operandi*?
- "5. What value do you attach to it as a remedial agent?
- "6. In what diseases have you found it most useful?"

Replies to be addressed A. Hard, M. D., Aurora, Kane county, Ill., early in March.


It would be well if other State Medical Societies would do the same thing. There appears only one difficulty: physicians do not answer these circulars promptly. Being much engaged in business, they defer doing so to a more convenient time, and finally forget it altogether. If they would give prompt attention to such matters, it would give local and State Societies much valuable information, and of great general benefit.

DR. S. W. BUTLER, senior editor of the *Medical and Surgical Reporter*, Philadelphia, has been appointed chief resident physician at the Philadelphia Lunatic Asylum.

CHICAGO COLLEGE OF PHARMACY.—A College of Pharmacy has been organized in the city of Chicago. Prof. Blaney has the chair of chemistry, and F. Scammon that of pharmacy.

CORRECTION.—Credit was omitted, unintentionally, in our last issue to the *American Medical Monthly* for the article on Strychnia, as well as to Dr. Gibbs, from whose monthly summary it was selected.

CORRESPONDENTS will oblige by writing plainly their names, town, county and State. We have, in several instances, been unable to answer letters because these are omitted.

 SUBSCRIPTIONS for 1859, commencing with the January number, expired with the December number.

Renewals for 1860 will begin with the January number.

An early Subscription will greatly facilitate our calculations, and enable us to make each edition sufficient to supply at any time the early numbers of the current year.

Physicians will oblige us by filling the blanks heretofore sent them with the names of other practitioners, and forwarding the same to us.

PROSPECTUS OF THE JOURNAL OF MATERIA MEDICA.

Eight Pages have been added to each number of the Volume for this year, making Forty Pages of reading matter in each number.

This will be a practical Journal, devoted to Materia Medica, Pharmacy and Chemistry; subserving the daily wants of the Apothecary and Physician. It will contain, regularly, discussions on various agents of our indigenous Materia Medica, that have lately come into medicinal use, their application, their indication and modes of administration; communications from physicians; latest general medical intelligence from American and Foreign Journals; new and favorite formulæ, together with everything of interest relating to progress in this important branch of Medicine, as improved processes, apparatus, manipulations, &c.

Contributions from medical writers of distinction and great practical experience will form an important and interesting feature of each number.

The Journal for 1860 has been enlarged eight pages, to increase the variety of selections from American and Foreign journals.

It will be issued regularly the first of each month.

TERMS—50 cents per year, in advance, which can be remitted in postage stamps.

VOLUMES for 1859 will be furnished, bound, at \$1, post-paid.

Correspondence.

THE following letters are selected from a large number received, as a fair expression of its patrons concerning the merits of the JOURNAL OF MATERIA MEDICA, and are respectfully submitted to those who are solicited to become subscribers:—

"HAMILTON, C. W.—It fills up a niche in the medical literature, of the greatest importance, and heretofore unoccupied."

"HENIKER, N. H.—I am very much pleased with it. It comes like a missing volume, and completes our set. We have journals in every other branch of medical science, and I have no doubt that the profession generally, as well as myself, have felt the want of just such a journal."

"KNOXVILLE, TENN.—I wish to renew my subscription to your Journal another year. I regard it as one of the most valuable journals of its size published, and hope you will receive such a support as will encourage you to continue its publication."

"GLENVILLE, ALA.—To a physician of much experience in the practice of medicine, I consider your journal as worth more than any other medical periodical in the United States."

"BERNARDSTON, MASS.—Although so far advanced in life, that I do not wish or expect to practice medicine much more, yet I am so well pleased with your journal, that I do not intend to be without it while I live, and can read."

"CAMDEN, ARK.—It strikes me as being a desideratum for the physician."

"RICHLAND, IOWA.—I have been so well pleased with your Journal, the past year, that I wish to become a subscriber for 1860, and trust I shall be as much benefited next year by its perusal as I have been the past."

"ROYALTON, VT.—I have read with a good deal of interest the copies of your Journal that you have sent me, and I am unwilling to do without it, and wish to be a regular subscriber."

"FARMERSVILLE, OHIO.—I have been receiving your valuable Journal for several months, and am so well pleased with it that I wish to be a lifetime subscriber to it."

"WISCASSET, ME.—I read your Journal with more pleasure, and can obtain more practical knowledge from it, than any other journal upon the same subject in the United States, and I take six different ones."

"MONTGOMERY, IOWA.—I have received a few numbers of your most inestimable Journal of Materia Medica, which I cannot think of doing without while I can raise fifty cents to pay for it. It is the very thing that all practising physicians need, not only monthly, but daily. I am glad to see such a jour-

nal as yours published, for it is just what the medical world needs, and have needed for a long time, in my opinion. Consider me, sir, a lifetime subscriber to your Journal while it is as meritorious as it now is."

"SYLACAUSA, ALA.—I am highly pleased with your Journal. It is the very thing for the practising physician, and is replete with useful knowledge."

"LEATHERWOOD, PA.—I have been in receipt of your journal for the past year, and consider it an invaluable acquisition to the profession."

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T H E

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On Vegetable Tonics.

BY CHARLES A. LEE, M. D.

NUMBER II.

WE have seen that there are, at least, forty-six natural orders of plants indigenous to North America, including one hundred and eight genera, and two hundred and two species, endowed to a greater or less extent with tonic properties. It would not be difficult to extend this list, but the plants which it would embrace have as yet been so imperfectly investigated, that no great practical benefit would accrue from such extension. There can be no doubt, however, that some of them will, ere long, be found to occupy an important rank in this class of remedies. The various plants belonging to this class might be arranged under six divisions, viz: *astringent tonics*, *pure or simple bitters*, *demulcent tonics*, *alterative tonics*, *antiperiodic tonics*, and *aromatic tonics*.

The astringent tonics have already been considered to some extent. We have stated that there is a large number of vegetable substances possessing astringency, but with little or no bitterness, such as oak bark, uva ursi, geranium, marsh rosemary, blackberry root, &c., and that all these might properly be ranked among tonics, inasmuch as they produce the same constitutional effects. Every practitioner must have observed that when given in small doses, and at suitable intervals, they improve the appetite,

aid digestion, and strengthen the general system. Their physiological effects are analogous, if not identical, with those of the bitter tonics, and they fulfill the same indications. Formerly they were extensively employed in paroxysmal affections as anti-periodics, as well as in cases of debility; though they proved of greater benefit when the latter was attended with exhausting discharges. We have a class of vegetable tonics which combine both bitterness and astringency in an eminent degree, and they occupy, perhaps, the first rank in this class of remedies. To this division belong the different species of *salix* and *cornus*, the *liriodendron*, the *pinckneya*, &c. Some of our tonic plants combine mucilaginous and demulcent properties with a bitter principle. Some, also, contain considerable quantities of starch, which imparts nutritive properties, while they are entirely destitute of astringency. A still larger number combine with a bitter principle more or less volatile oil, which imparts an aromatic flavor, and allies them more closely with diffusible stimulants, such as the *serpentaria*, the *asarum canadense*, the orange and lemon peel, and many of the *Labiata* class of plants.

The PURE BITTERS constitute a distinct class, including all those vegetables which possess bitterness without aromatic or astringent properties. What is called the *bitter principle* is not a principle *per se*, but an alkaloid, resinoid or neutral substance.*

The *tonic properties* of vegetables were formerly supposed to reside in what was called *extractive matter*. At present, however, chemistry recognizes no such substance. What goes under this name is merely the product of the evaporation of the infusions or tinctures of plants, after their known principles have been separated. Thus, if the soluble ingredients of a plant have been dissolved out by water, we have a variety of proximate principles,

* To obtain this principle, the bark or root in question may be coarsely powdered and placed in a displacement apparatus, and treated with proof spirit; then add a solution of acetate of lead to the liquid, filter, and free from excess of lead by sulphuretted hydrogen; filter again, evaporate to two-thirds, add a small quantity of animal charcoal, and filter. The solution is then to be evaporated at the lowest possible temperature, and, if practicable, *in vacuo*. The evaporation may be checked as soon as a pellicle forms on the surface, or the fluid becomes syrupy. On cooling, crystals, if the active principle is crystallizable, will form, which, if colored, may be decolorized by animal charcoal and recrystallization. Or it may, perhaps, be obtained by concentrating a watery decoction of the plant; agitating when cold, occasionally, with lime for twenty-four hours; evaporating the filtered liquor to dryness, acting on the residuum with boiling rectified spirit, when impure crystals may be obtained by concentration and cooling, which may be purified in the manner above mentioned. A little ether should be added to the alcohol employed.

most of which have a strong affinity for oxygen, by which, when evaporation is carried on in the open air, they are converted into complex substances, scarcely soluble in water, and if heat be applied these reactions occur to a still greater extent. The fluid becomes turbid and brown, and the extract obtained from it is only a mixture of the different organic constituents in great part decomposed. This brown substance is called *apotheme*. The solid extracts, formerly in use, were nothing more than these insoluble and inert compounds. Kane considers as *extractive* that substance, whatever it may be, which is contained in the fluid before the real constituents of the plants are all converted into *apotheme*, and which dissolves equally in water and dilute alcohol, but not in absolute alcohol or ether. Such a product will be more or less colored, uncrystallizable, and will precipitate metallic salts. It may possibly retain some of the flavor of the original plant, but it will have lost most of its medicinal properties.

Pharmaceutical writers have been in the habit of attributing different kinds of extractive matter to different classes of plants, as *bitter extractive* to the bitter tonics, *astringent extractive* to astringents, *gummy extractive* to plants yielding gum, pectin or albumen. All these so-called extracts, however, are, for the most part, but the complex products of the decomposition of other bodies. As extracts are now prepared in our establishments by steam, *in vacuo*, and at a low temperature, neither *extractive* nor *apotheme* is produced; but we obtain the constituents of the plant in a concentrated form, without having undergone any chemical changes by the operation. Some of the bitter tonics owe their bitterness as well as activity either to a crystalline neutral principle, as salicine, cetrarin, columbin, hydrastin, liriodendrin, quassin, &c.,* or to an extractive matter, soluble in water, but not crystallizable, as the bitter extractive of coptis, chimaphila, cornus, eupatorium, serpentaria, marrubium, &c. Impure crystals of

* The following method is, perhaps, the best for purifying resinoid and neutral bitter principles:—Pulverize the substance, and place the powder in a glass tube; pour as much cold absolute alcohol over it as to moisten it well; after a few hours pour off the alcohol, which will be found highly colored. This removes a large portion of the fatty and coloring matters mixed with it. The powder is then to be treated with boiling alcohol, a little animal charcoal added, then filtered, and allowed to evaporate spontaneously. If not perfectly colorless, it may be treated with cold alcohol, and subsequently dissolved in boiling water, filtered, and again evaporated in a similar manner. Some of these principles, owing to their slight solubility in water, do not impart a bitter taste when first taken into the mouth.

gentisic acid may be obtained from the bitter extractive of gentian, but the active and bitter principle, not yet isolated, does not reside in them. Some of the tonic vegetables also contain alkaloïds, to which they owe their medicinal virtues and bitter taste, as the cinchona, the strychnos, ignatia, beeberrine bark, &c.; while tannic acid is the tonic constituent in the pure astringent vegetables, as the geum, geranium, spirea, uva ursi, rubus, statice, &c. If the statement of Kane be admitted, then *salicine* is frequently the tonic principle in plants, inasmuch as it is found in the leaves and bark of a great variety of trees, though particularly abundant in those species of *salix* which have a bitter taste. This statement needs further confirmation. It is a well known fact that most vegetable tonics possess a bitter quality to a greater or less extent; and some writers on therapeutics have attempted to show that this quality is essential to tonics. There are, however, some exceptions to this law, as we have seen in the case of many astringents, which though tonic are not bitter; while the converse is evidently untenable, opium, digitalis, and many other drugs, though bitter, having no tonic qualities. However this may be, it is very certain that bitter extractive, or the bitter principle, whatever it may be, subserves a most important purpose, not only as a medicine, but also as a stimulus to healthy digestion in herbivorous animals generally, as stated by Paris, who says that it passes through the alimentary canal without undergoing any diminution in quantity or change in its nature. This writer calls attention to the fact that cattle will not thrive upon grasses which do not contain a portion of this principle, and that sheep fed exclusively on yellow turnips, which contain little or no bitterness, are very certain to become sickly, and perish. There can be no doubt that the bitter principle in the Irish and Iceland moss renders these substances much better adapted for purposes of nutrition, counteracting, as it does, a purely mucilaginous diet; while it is admitted that animals fed on marshy grounds, on grass containing little nourishment, are best defended from the diseases they are liable to contract in such situations, by the ingestion of bitter plants, as the trefoil, gentian, &c. Prof Chapman used to state, in his lectures, that the bitter principle was as essential to the digestion of vegetable as salt is to animal matter, serving as the most congenial stimulus to the stomach when en-

gaged in this process. Much might be said of its prophylactic virtues in preventing the generation of worms.

Admitting, then, as we must, that there are several tonic bitter principles, let us next inquire into their physiological and therapeutical effects upon the human body. The vegetable bitters exert a powerful effect upon the digestive organs, and by nervous sympathy, as well as absorption upon the rest of the system. They stimulate the mucous and muscular coats of the stomach, and thus check any tendency to acetous fermentation; promote tardy digestion, increase the nutritive powers of those vegetables with which they are combined, and in certain debilitated conditions of the organs prove powerfully remedial. There is no evidence that the pure bitters exert much influence over the circulatory or the nervous system, but by modifying the vital properties of the mucous and muscular tissues of the digestive canal they contribute to the production of a more healthy blood: the natural stimulus of all the organs and functions. That the effect is especially propagated to the collatitious viscera, the liver and pancreas, is very manifest; nor is it less evident that the active principles are taken into the circulation, and act on the nutritive function throughout the entire system. In excessive doses simple bitters will disturb the stomach, causing nausea and vomiting, or purging; but even here they do not much disturb the action of the heart or cerebro-spinal system. Their chief therapeutic uses, then, are to invigorate digestion, promoting the function of both primary and secondary assimilation, and well suited to all cases of gastric and enteric debility unattended with inflammation, congestion, or any structural and organic changes. Under such circumstances they promote the secretion of a more healthy gastric juice, and thus by favoring the solution of the food relieve the flatulence, gastric uneasiness, acid eructations, headache, &c., consequent on a debilitated state of the stomach and a morbid condition of its secretions. And this effect is propagated throughout the entire alimentary canal.

Another useful application of the simple bitter tonics is in the management of convalescence. As a general rule, pure air and a suitable diet will suffice for a gradual restoration of the strength after an attack of acute disease, as fever or inflammation. But cases not unfrequently occur where the digestive organs need the

stimulus of some of the bitter tonics, either alone or associated with such medicines as promote the secretions and excretions. It should be borne in mind that debility, which is chiefly manifested in the associated organs of digestion, can never be permanently removed unless the secretions and excretions be duly promoted. To secure this end, the simple bitter tonics should be combined with aperients. But this combination will be hazardous as long as there is irritation, or congestion, or active determination to any of the abdominal viscera. In cases, moreover, to which they are adapted, much discrimination is needed in regard to a choice of the particular tonic best suited to the case. It is a very common opinion that all the pure bitters resemble each other so closely that it matters very little which is selected. But this is an error. In some, Colombo, in others gentian, and in still others quassia, will best fulfill the existing indication; so that, although analogous in chemical composition, they widely vary in their medicinal operation and therapeutical effects. It may be difficult or impossible to specify the peculiarities of each individual in the group, but experience fully sustains the opinion that their remedial effects often widely differ under similar circumstances. It is not unusual, for example, to find one of the group exciting nausea, proving unacceptable to the stomach, and, of course, inefficacious; while another, with similar sensible properties, allays all gastric uneasiness, excites the appetite, and facilitates the cure. There are some cases where debility of the digestive mucous surface is complicated with irritation, and yet some of the bitter infusions may be exhibited with benefit, such as gold thread, gentian, American Colombo, or the menyanthes, and especially if combined with acids or small quantities of potash or soda. Vomiting is often speedily allayed by such a combination. If there is a lax state of the bowels, associated with asthenia of the digestive organs, not dependent on inflammatory irritation of the mucous surface, the bitter infusions, combined with the alkaline carbonates, are often of great service. There may be cases in which the bitter tonics would seem to be indicated, and yet there exists great torpor of the liver, or accumulations of bile in the gall bladder and hepatic ducts; here cholagogues should always precede the use of the tonic. But in regard to the organs of secretion and excretion, we are to remember that tonics have a ten-

dency to strengthen them and augment their energy; and when their products are too abundant, from relaxation and debility, the secretory function will probably be restored to its normal state by the tonic influence thus exerted; while if the secretions are diminished in consequence of a torpor of the organs, they may be restored by a similar tonic operation—so that this class of remedies have a regulating effect, proving, under certain circumstances, diuretics, diaphoretics, emmenagogues, expectorants, &c. They, however, will accomplish the end sooner, and with more certainty, if preceded by some medicine acting specifically on the organ whose functions are suspended. This controlling and regulating influence of tonics is well illustrated in the colliquative sweats of phthisis, which are greatly lessened by a few drops of aromatic sulphuric acid, or a few grains of quinine, given at bed time. They also lessen the frequency of the pulse, while they increase its force by lessening the irritability of the heart and increasing the tonicity of its muscular fibres. The power of the bitter tonics in allaying morbid irritability and sensibility consequent on great exhaustion, is constantly seen in the latter stages of most diseases. Inflammation does not necessarily contra-indicate their use, any more than it does the use of stimulants and supporting agents generally, as animal broths, &c. It will depend on the kind of inflammation, its seat and stage, and particularly the constitution, previous habits, and present state of the vital forces of the patient. If there is a loss of appetite and digestive power, independent of local disease of the stomach, and consequent on the general languishing state of the powers of life, then some of the bitter tonics will be found greatly serviceable. The increased tonicity which they impart to the whole digestive system often seems essential to recovery. The morbid irritability dependent on protracted disease, and consequent prostration, will be relieved by measures calculated to restore the general strength, and among these the bitter tonics are among the most valuable. Their use is often dispensed with from a fear, often ungrounded, that they may disagree, and aggravate the existing symptoms. But an observant and cautious practitioner will always guard against such result, by giving them at first in small doses, or combining them with alkalies, laxatives, or some mild aromatic, or suspending their use entirely, if they are found, on trial, to dis-

agree. If the circulation is languid from general debility, in which the heart will participate, or if the pulse is preternaturally frequent from existing irritability, the bitter tonics will be found to exert a regulating power, as in the case of disordered secretion, and the pulse will gradually be brought to the healthy standard. Nor does inflammation of some of the more important organs of the body necessarily forbid their use. Even in pneumonia, especially the typhoid variety, or where it occurs in persons of broken constitution, or accustomed to the daily use of alcoholic stimulants, this class of remedies may often be used with much advantage. Who has not witnessed the good effects of quinine, or the hop, under such circumstances? In this affection, which seems to have, as a general rule, a prescribed limit, the strength must be sustained, and the vital forces invigorated, in order that nature may be able to accomplish the cure. forcible coughing, which is necessary for successful expectoration, requires considerable bodily vigor, without which the patient must succumb from the overloaded condition of the bronchial tubes. A certain amount of aliment must be taken and assimilated, in order to cause the maintenance of sufficient strength to disgorge the lungs of the mucous secretions constantly accumulating. To this end, the tone of the stomach must be sufficiently maintained for the digestion of a necessary amount of nutriment. The same principles also are to guide us in the management of chronic diarrhoea, dysentery, and all affections attended with exhausting discharges. As time is an essential element in the cure, and all depends on the recuperative energies being properly sustained, our chief attention is to be directed to the sustentation of the nutritive function and the supply of suitable nourishment—not that specific means, also, are not to be employed, but only in subservience to and in alliance with the former.

These remarks, which might be much extended, must suffice on this branch of our subject.

Preparations.—Our standard formulary, the United States Pharmacopœia, recommends the bitter tonics under the forms of infusion, decoction, solid extracts, fluid extracts, tinctures, powders, and syrups.

Infusions.—It is well known that the bitter principles of vegetables are taken up by water, hot or cold, by alcohol, proof spirit, wine, or sulphuric ether. Water, proof spirit and wine are the

usual menstrua. As a general rule, the best method of extracting and preserving these principles is by percolation with cold water. Hot water readily dissolves the amylaceous matter contained in vegetables, which readily undergoes decomposition on standing, especially in warm weather. Cold water, it is true, dissolves the vegetable albumen, while both hot and cold dissolve the gum, sugar, extractive, and, perhaps, other principles liable to fermentation. The pure bitter vegetables, as gentian, gold thread, colombo, therefore should be subjected to maceration, or displacement in cold water, and a small portion of spirit afterwards added, if it is desired to preserve them for any length of time. It is well, perhaps, to recollect that tartarized antimony, salts of lead, mercury and silver, are incompatible with one or more of the proximate principles contained in bitter infusions. A cold infusion of wild cherry bark will keep for some days without undergoing any change, owing to the antiseptic influence, perhaps, of the hydrocyanic acid contained in it.

Decoctions.—Decoction is an objectionable method of extracting the proximate principles of plants, inasmuch as many of them are decomposed at a temperature of 212° Fah.; or if not destroyed entirely, their medicinal activity is essentially diminished. If the active constituents are volatile, of course they are dissipated. We have already alluded to the important chemical reactions which take place during ebullition, in consequence of which the active constituents are either rendered insoluble or undergo decomposition. For example, the alkaloids in cinchona bark during ebullition combine with the red coloring principle of the bark, and form a compound nearly insoluble at 60°. Besides the objection, also, that boiling dissolves the starch, which renders a vegetable solution mucilaginous and apt to become speedily mouldy, this process is unnecessary, inasmuch as, in general, the same proportion of water exhausts vegetable substances equally well at 60°, in the way of percolation, as at 212°, in the way of decoction, and often more completely. But, in regard to the pure bitters, the ordinary method of infusion in cold water will answer every purpose.

Solid Extracts.—These, if prepared by steam apparatus, with a vacuum pan, in which evaporation can be carried on rapidly, and at a low temperature, are not only an unobjectionable, but a very

valuable and convenient preparation, especially where the pillular form is desirable. Thus the solid extracts of colombo, gentian, quassia, &c., prepared in this manner, and now everywhere to be obtained, are infinitely preferable to the same preparations as formerly made by boiling and evaporation under the ordinary circumstances of pressure and exposure to the air.

Fluid Extracts.—The fluid extracts of the simple bitters, as now prepared by displacement and evaporation, in *vacuo*, are an admirable form for administering this class of remedies. Though unofficinal, they are generally preferable to the infusions or decoctions, when most carefully prepared. They contain all the active proximate principles of the plant, concentrated, and in a form not likely to undergo any change. Thus the fluid extract of gentian is an elegant preparation, which ought to supercede entirely the tincture, infusion, or decoction of the same plant; and the same may be said, indeed, of all the fluid extracts of the pure bitters.

Tinctures.—The tinctures of the bitter tonics are gradually giving place to the fluid extracts, and ere long will be rarely used, except in cases where the stimulus of alcohol is desirable in connection with the bitter principle. It is admitted, however, that their protracted use is objectionable, from their liability of creating an appetite for alcoholic stimulants. This will be obvious, when we consider that the dose of bitter tinctures ranges from two fluid drachms to half a fluid ounce. It is better, then, and safer to use a fluid extract, adding, if necessary, wine, spirit, or some aromatic tincture, in proper quantity.

Powders.—These, if properly prepared, contain, of course, all the proximate principles of the plant, in their natural condition; but then they contain a large portion of inert, ligneous matter. The dose is large, and often very disagreeable to the taste. Many of them undergo spontaneous change when exposed to the light or atmosphere, especially when moist; and moreover, they are so liable to adulteration, without the possibility of detection, that other preparations of the same vegetables have very generally been substituted for them.

Syrups.—The great objection to this form, in the case of vegetable bitters, is that where the digestive organs are much debilitated, and there is a want of tone in the stomach, sugar is very

apt to cause acidity, flatulence, &c. From the agreeable taste and conservative power of sugar, it is well adapted to pharmaceutical purposes; and where there are no objections to its use, a syrup forms a very agreeable and useful preparation; but it seems less suited to tonic than to any other class of remedies. We have in market a syrup of orange peel, of wild cherry, of rhatany, of ginger, chamomile, pipsissewa, uva ursi, blackberry root, horehound, carrageen, &c.; but the pure bitter tonics can very seldom be administered to advantage under this form. As demulcent expectorants, some of these syrups, as of wild cherry, horehound, liverwort, &c., are admirable.

Beers.—The infusions of bitter vegetables generally ferment with yeast, and yield a bitter fluid, which is valuable often as a stomachic tonic. A spirit is thus prepared from gentian in Switzerland, which is much prized as a tonic cordial. Brown sugar and ginger, or other aromatics, may be added in suitable quantity. These fluids should be bottled carefully soon after fermentation has commenced. Dose, from one to four fluid ounces, three times a day.

Iron and Its Preparations.

THERE is in the blood a red coloring matter called hæmotosin. It is found by chemical analysis that iron is an essential part of this substance. The existence of the right amount of hæmotosin in the blood is of vital importance. It is contained in the red globules of the blood. When it is diminished in quantity the number of these red globules is lessened in the same proportion. This produces a paleness of all the tissues, an inactivity of the muscular fibre, and impairment of all the animal functions, and a general languor and debility of the whole frame. This is anæmia.

In all cases in which iron is used there is a deficiency of this red coloring matter; and in all instances of anæmia iron is appropriate as a remedy. In this way it may benefit, and sometimes cure, other disorders in which anæmia is apt to be a prominent symptom. Such are amenorrhœa, scrofula, cancer, chronic ague, hysteria, chorea, and Bright's disease of the kidney. Iron ought always to be conjoined with the remedies specially appropriate to each case. In chorea, arsenic or quinine may be used;

with or without iron. Aloetic purgatives may be advantageously combined with chalybeates in amenorrhea and hysteria. Their use may be accompanied by cold affusions, or by some antispasmodic stimulant. In scrofula, the iodide of iron affords us a valuable double remedy. In chronic cases of ague, when accompanied with anaemia, as is often the case, iron may be prescribed with advantage. In general anaemia, an occasional purge, a generous diet, with good air and exercise, should be combined, if possible, with the chalybeate treatment.

The astringent salts of iron are particularly appropriate in cases of hemorrhage, for, in addition to their astringent action, they tend to restore the deficient red coloring matter of the blood. In many such instances the sulphate or the sesquichloride of iron may be advantageously prescribed along with sulphuric acid. The above salts of iron are, by their topical action on the stomach, of service in cases of atonic dyspepsia.

When the iron has entered the system, it is not necessarily excreted again from it, because it is not unnatural to the blood; but when it is given in large doses, iron passes off by the urine and by the other secretions. Some portion may be excreted by the mucous membrane of the intestines, and combine in the cavity of the bowel with sulphuretted hydrogen. The resulting sulphuret communicates to the faeces a characteristic black color.

The general contra-indication to the use of iron is plethora and inflammation, producing, when injudiciously employed, heat, thirst, headache, difficulty of breathing, and symptoms of an excited circulation.

Iron must not be compounded with any vegetable bitters that contain tannin, for it forms therewith an insoluble salt—the tannate of iron. It can be used with colombo, quassia and gentian. So acids and acidulous salts must be avoided, except it be the acid forming the particular salt administered.

It is always desirable to prepare the bowels for the exhibition of iron, by the administration of some light purgative. Care must always be taken that, when it is persevered in for a long time, it does not accumulate in the bowels.

FERRI RAMENTA (*Iron Filings*).—Dose: five to twenty grains, given in molasses or honey, or made into pills with some bitter extract.

FERRI PULVIS (*Quevenne's Iron*).—Dose: two to five grains, in the form of pill, made with sugar and gum. M. Quevenne considers it, of all the insoluble preparations, the most easily assimilated. M. Coste regards it superior to other ferruginous preparations in engorgement of the spleen succeeding to intermittent fevers.

FERRI CARBONAS (*Red Oxide of Iron*).—Dose: as a tonic, five to thirty grains, three times a day, in pill or powder, and frequently combined with aromatics and vegetable tonics. The carbonate of iron is not soluble in water; the bicarbonate is soluble in water, the chalybeate springs holding the bicarbonate in solution. Thirty-six grains of carb. per day, in syrup, have been given in second stage of whooping cough, acting promptly and efficaciously; in neuralgia, chorea and tetanus, in doses of one or two teaspoonsful. Excellent in chlorosis, when the system is prepared for iron. In true chronic neuralgia, and in the severest cases of neuralgia under the form of hemicrania, in large doses, it has proved entirely successful. In tic-doloureux, four drachms have been given.

TONIC POWDERS.

℞.—Ferri Carbonas,
Pulv. Colombo,
Pulv. Ginger, - - - - - aa. 3j.

℞.—Ferri Subcarbonas, - - - - - gr. x.
Pulv. Aromatic, - - - - - gr. v. M.

Make a powder, to be taken morning and noon.

℞.—Ferri Subcarbonas, - - - - - gr. x.
Valerianæ, pulv., - - - - - 3ss.
Syrup Zingib., - - - - - q. s.

Fiat volus.

℞.—Ferri Subcarbonas,
Extract Anthemid., - - - - - aa. 3ss.

Make twelve pills. Dose: two, three times a day.

℞.—Ferri Subcarbonas, - - - - - 3i.
Hydrarg., - - - - - 3ij.
Confect. Rosæ, - - - - - 3iii. M.

Dr. Collier recommends this as especially eligible for the strumous, the irritable, and the reduced anæmic constitutions requiring mercury.

℞.—Ferri Subcarbonas,
Confectio. aurant., - - - - - aa. ʒj.

Syrup Zingib., - - - - - q. s.

Make an electuary. Take a small teaspoonful, two or three times a day.

℞.—Litharge Plaster, - - - - - ℥ij.
 Frankincense, - - - - - ℥ss.
 Ferri Subcarbonas, - - - - - ʒ iii.

In muscular relaxation and weakness of the joints.

The emplastrum ferri, ferrum ammoniatum, and tinctura ferri chloridi, are the officinal preparations of the subcarbonate. The ferri carbonas saccharatum has the advantage of being readily soluble in the acids. Dose: five to thirty grains.

FERRI IODIDUM (*Iodide of Iron*).—Dose: one to five grains. Soluble in water and alcohol. Combines the alterative properties of the iodine with the tonic powers of the iron. Used in scrofulous affections, chlorosis, incipient scirrhus, bronchocle, atonic dyspepsia, and general debility. A standard remedy in secondary syphilis, in combination with iodide of potassium. Likewise used, with great success, to remove the consequences of syphilis.

℞.—Ferri Iodide, - - - - - gr. xvi.
 Tincture Colombo, or
 " Gentianæ Comp., - - - - - f. ʒj.
 Aquæ Destillat., - - - - - f. ʒ vii.

Dose: two tablepoonsful, two or three times a day.

℞.—Ferri Iodide, - - - - - gr. iii.
 Aquæ Destillat., - - - - - f. ʒ vi. M.

As an injection in gonorrhœa.—*Ricord*.

Syrup of the Iodide of Iron.—The saccharine matter is supposed to prevent its oxydizing. This combination prevents idism. Twelve minims of the syrup of iodide of iron is equal to one grain of iodide of iron. Dose: twenty to fifty drops.

The pillulæ ferro iodide are officinal. Each pill contains a little over a grain and a half of iodide of iron.

FERRI BROMIDUM (*Bromide of Iron*).—Tonic and alterative, in tetter, scrofulous tumors, inflammation of the glands, both acute and chronic, erysipelas, and amenorrhœa.

℞.—Ferri Bromidum, - - - - - ʒj.
 Extract Glycyrrhiz., - - - - - q. s.

Make sixty pills. Dose: one or two, morning and evening, in cases of scrofula and hypertrophy of the uterus especially.

Syrup of Bromide of Iron.—An eligible form for administration of bromide of iron is the following:—

R.—Bromine,	- - - - -	200 grains.
Iron Filings,	- - - - -	85 "
Water,	- - - - -	f. $\frac{3}{4}$ ivss.
Sugar,	- - - - -	$\frac{3}{4}$ iij.

Make a solution in the manner directed for preparing the official solution of iodide of iron. Dose: twenty minims, three times a day, gradually increased.

TINCTURA FERRI CHLORIDI (*Muriated Tincture of Iron*).—Dose: ten to thirty minims. Powerful astringent and tonic. In large doses, every few hours, in erysipelas. Externally in cancrum oris. Given in infusion of tansy, quassia, or in simple water; in all hemorrhages of a passive character; in the gastric hemorrhage of old drinkers, fifteen to twenty-drop doses; in discharge of blood from the urethra, and in leucorrhea; as an astringent in excessive sweating. As antidotes to this mixture, if taken in poisonous doses, give demulcents, mucilaginous drinks, &c.

R.—Tincture Ferri Chloridi,	- - - - -	3 iss.	
" Opium,	- - - - -	3 iss.	
Sulphate Quiniae,	- - - - -	grs. viii.	
Aquæ,	- - - - -	$\frac{3}{4}$ vi.	M.

The tinct. ferri chloridi has lately been brought forward, with the highest encomiums, as an internal agent in the treatment of erysipelas, whether idiopathic, traumatic, or the erysipelas of infants. It is necessary to bring the system rapidly under its influence.

FERRI SULPHAS (*Sulphate of Iron*).—Astringent, tonic, emmenagogue. Dose: one to five grains. In debility of the alimentary canal, and ulceration of the colon, with constant pains, it acts as a tonic and astringent. To arrest excessive perspiration, give two grains at bed time. It is beneficial in diseases attended with immoderate discharges; useful in amenorrhea, occurring when there is neither marked plethora nor anæmia. Its external use is very varied, depending on its astringent and tonic properties. In old ulcers, in solution from one drachm to one ounce, in a pint of water. As a collyrium, five to ten grains to six ounces of rose water, in sub-acute inflammation of the eye. One grain to the ounce of water, as an injection in prolapsus ani of

children: passed up the bowel, once or twice a day; also to complete the cure of internal piles.

The officinal preparations of the salt are numerous.

℞.—Ferri Sulphas, - - - - -	12 grains.
Morphia Sulphas, - - - - -	3 "
Extract Gentian, - - - - -	q. s.

Make twenty-four pills.

℞.—Pulv. Myrrh, - - - - -	3 ij.
Sodæ Carbonas, - - - - -	
Ferri Sulphas, - - - - -	aa. 3 j.
Syrup simple, - - - - -	q. s.

Make eighty pills. Dose: two to six, three times a day.

℞.—Ferri Sulphas,	
Gum Myrrh, - - - - -	aa. ʒ ij.
Potassæ Carb.,	
Sapon. Purif., - - - - -	aa. 3 ss. M.

Make forty pills. Dose: two, morning, noon and night, in suppression of the menses.

FERRI ET ALUMINÆ SULPHAS.—Dose: five to ten grains, in any aromatic water, or in molasses. A superior astringent in the treatment of chronic diarrhœa, dysentery and cholera morbus, and the colliquative diarrhœa and sweats of the consumptive. Applied externally, it is a powerful styptic, and may be used in epistaxis and in hemorrhage from leech bites. Also, as a gargle in relaxation of the uvula and fauces, and in the cynanche of scarlatina.

FERROCYANIDE OF POTASSIUM.—3 ij. to f. 3 j. water. Dose: for an adult, thirty to forty-five drops. Sedative, tonic, astringent. Dr. Eberle regarded this salt as advantageous to women in the change of life, and in chronic uterine hemorrhage with great uterine debility. Its astringent powers are most manifest in the colliquative sweats of chronic bronchitis and phthisis.

MISTURA FERRI AROMATICA.—Tonic, in doses of one or two fluid ounces.

MISTURA FERRI COMPOSITA.—Dose: one or two fluid ounces, three times a day, in debility of the digestive organs, especially when attended with derangement of the menstrual function. Hence it is used in chlorosis and hysterical affections.

C u b e b s .
(PIPER CUBEBA.)

THE plant which affords the officinal Cubeb is a native of Java (where it is called *cumac*), Nepaul (there called *timmue* and *taizbul*), Sierra Leone, and the Isle of France. It belongs to the natural family *Urticæ* of De Candolle and *Piperaceæ* of Lindley, and to Linnaeus' class and order *Diandria Trigynia*.

It is a small climber, and produces clusters of small berries, scarcely so large as white pepper, which are the officinal part of the plant, and with which our readers are no doubt familiar.

Chemical Properties.—Three analysis of Cubeb have been made—one by Trommsdorff, in 1811; a second by Vanquelin, in 1820; and a third by Monheim, in 1835. The latter found, in one hundred parts—

Green Volatile Oil, - - - - -	2.05
Yellow Volatile Oil, - - - - -	1.00
Cubebin, - - - - -	4.05
Balsamic Resin, - - - - -	1.05
Wax, - - - - -	3.00
Chloride of Sodium, - - - - -	1.00
Extractive, - - - - -	6.00
Lignin, - - - - -	65.00
Loss, - - - - -	15.05
<hr/>	
Total, - - - - -	100.00

Vanquelin describes two resins—one green, liquid, acrid, and analogous, both in odor and taste, to balsam of copaiba; the other brown, solid, acrid, and insoluble in ether. *Cubebin* is a crystallizable substance, obtained, according to Nollinberger, of the United States Naval Hospital, New York, by exhausting the Cubeb from which the oil has been distilled, by alcohol of sp. gr. 0.85; driving off the alcohol, setting aside the resinous matter which remains, for several days, till it forms a mass of crystals. By dissolving again in hot alcohol, and filtering through animal charcoal, it may be obtained in beautiful white, needle-shaped crystals. It is very analogous to piperine, but differs from it in composition, as it contains no nitrogen. Cassola, a Neapolitan chemist, says it is distinguished from the piperine by

the fine crimson color which it produces with sulphuric acid, and which remains unaltered twenty-four hours.

Cubeb deteriorate by age, particularly if in the powdered state, and become weaker in consequence of loss of their volatile oil. They are found adulterated with *pimento* and species of the Piper family. Mr. Carney, in his report upon adulterations, speaks of a false berry used for this purpose, which is readily distinguished, as it is *bi-lobed*, while the Cubeb is a *single-lobed berry*. Fifteen per cent of it existed in one lot of Cubeb. The berry is inert and worthless, and is not possessed of any deleterious property. The name the committee were unable to ascertain.

Dr. Ainslie, in his *Materia Medica of Hindostan*, says that Cubeb were used by the Indian practitioners as a grateful stomachic, carminative, and seasoner; but there does not appear evidence that they were known to the ancients. The Arabians place them among their *mudorrat* (*stimulantia*). The Mahometans not unfrequently employed them in cases of gonorrhoea and gleet. Mr. Crawford, author of the History of the Indian Archipelago, was the first who wrote on them. His communication appeared in the *Edinburgh Medical and Surgical Journal* for January, 1818, which was followed by a paper in the same journal by Dr. Adams, by Dr. Jeffreys, and others. Dr. Ainslie says:—"The German and other physicians on the Continent at the time that Murray wrote, (at Gottingen, in 1790,) do not appear to have been at all aware of those virtues which Cubeb have since been found to possess, and that that distinguished writer (Murray) thought they may prove serviceable in certain dyspeptic affections, and the vertigo consequent upon such complaints."

The experience of medical men confirm their action on the human system to be stimulant, possessing the property of arresting excessive mucous discharges, especially from the urethra. Pereira says of Cubeb:—"Taken in moderate doses, they stimulate the stomach, augment the appetite, and promote the digestive process; in large quantities, or when the stomach is in an irritated or inflammatory condition, they cause nausea and many unpleasant symptoms. They appear to exercise a specific influence over the urino-genital apparatus, act frequently as a diuretic, and at the same time deepen the color and cause a peculiar aromatic odor to the urine."

The principal use of Cubebs is in the treatment of gonorrhœa. The same considerations that apply to the use of copaiba are applicable to the use of Cubebs. They are usually given in as large doses as the stomach can bear, in the early stage of the disease. According to Pareira, experience has proved that in proportion to the length of time the disease has existed it is less amenable to the influence of this remedy. In some instances an immediate stop is put to the progress of the disease; and he does not consider that the presence of active inflammation of the urethra as positively precluding their use, and has seldom seen them aggravate the symptoms; and, in considering the ill effects attributed, as swelled testicles, he has not known it to be more frequent than when they were not used.

Dr. Jeffreys considered it not only a safe remedy, but in a generality of cases more useful and expeditious than any which had been introduced into practice; that it possesses what may be justly called a specific in most constitutions, especially when used in the early and acute forms of the disease; and, contrary to Sir Astley Cooper, "that such expedients are improper when much inflammation exists, or the patient is of an irritable habit," asserts "that it is in the more inflammatory forms of the disease in which its efficacy is most certainly displayed."

Each mode of treatment appears to have had, and yet has, its advocates; and there are not a few who doubt its curative powers. But the mass of evidence in its favor can leave no doubt upon this point. The only question which we have to meet is the proper time of administration. There are physicians who administer both Cubebs and copaiba in every stage of the disease. Dr. Boughton gave Cubebs in fifty cases. Ten were cured in from two to seven days, seventeen in from eight to fourteen days, eighteen in from fifteen to twenty-one days, and one on the fifty-fifth day. In four only was no benefit obtained.

In the chronic stage of gonorrhœa, Ricord gives Cubebs in combination with sesqui oxide of iron, with injections, four times a day, of solution of two grains of nitrate of silver to eight ounces of water; and as an opiate in gonorrhœa, Dr. Berton recommends the following:—

R.—Pulverized Cubebs,	-	-	-	-	-	2 ounces.
Balsam of Copaiba,	-	-	-	-	-	2 "

Alum,	-	-	-	-	-	-	-	1 ounce.
Extract Opii,	-	-	-	-	-	-	-	5 grains.

Of this mixture, give one drachm, night and morning, in the pulp of a prune, increasing the dose to two drachms, morning and evening.

The *Journal des Connoissances Médicales* recommends very highly the combination of Cubebæ and alum in the treatment of gonorrhœa; adduces several cases illustrative of its efficacy, and remarks that "it is more than probable that alum has not been used in cases of gonorrhœa as much as it deserves to be; that the salt is rapidly absorbed into the system, and is eliminated in a great measure by the urine, as appears from numerous experiments."

The formula is:—

R.—Powdered Cubebæ,	-	-	-	-	-	-	-	2 ounces.
Powdered Alum,	-	-	-	-	-	-	-	$\frac{1}{4}$ ounce.

Mix well. Divide into nine doses, of which one is to be taken every eight hours.

Dr. Deiters found Cubebæ more effectual than any other remedy in curing the incontinence of urine common to children. This complaint may, he says, depend on atony of the bladder or the presence of intestinal worms. In the former case they act as a tonic, and in the latter as a valuable anthelmintic. Cubebæ should be given in considerable doses—a few grains for infants, and half a teaspoonful, two or three times a day, for children of somewhat more advanced age. Its effect is usually speedy and permanent. It may happen that the incontinence will return at periodical or irregular periods, but these recurrences will become less frequent, and eventually disappear altogether. He has, in some cases, found it necessary to continue its use three to eight weeks, without observing any injurious effects.

Dr. Deiters also states that he found it most efficacious in checking nocturnal emissions in cases of spermatorrhœa.

In leucorrhœa and blenorhœa they have been highly recommended by many practitioners. The following formula was suggested by Ryan:—

R.—Cubebæ, pulv.,	-	-	-	-	-	-	-	1 ounce.
Ergot,	"	-	-	-	-	-	-	$\frac{1}{4}$ "
Aromatic,	"	-	-	-	-	-	-	2 scruples.
Sugar,	-	-	-	-	-	-	-	1 drachm.

Divide in eight parts. Give one, three or four times a day.

In abscess of the prostrate gland, twenty to thirty grains, three times a day, have proved beneficial; also, in cysterrhoea and piles they have, in several cases, proved serviceable.

In catarrhal affections of the membrane lining the ærian passages; in inflammation attended with increased discharge of the Schneide-rian membrane lining of the nose, and the sinuses communicating with it; in aphonia; in defective audition caused by catarrhal affection of the eustachian tube, Cubebs have been found exceedingly serviceable, either by chewing the whole berry or in the form of the following lozenge, called SPITTA'S LOZENGES:—

R.—Powdered Cubebs,	- - - -	2 drachms.
Balsam Tolu,	- - - -	6 grains.
Mix, and add		
Extract Liquorice,	- - - -	1 ounce.
Syrup of Balsam Peru,	- - - -	1 drachm.
Gum Arabic,	- - - -	q. s.

Rub well together, and form lozenges of ten grains.

Dr. Fosbroke commends their use in cases of inflammation of the mucous membrane of the intestinal canal, conjoined with the oxide of bismuth, as follows:—

R.—Powdered Cubebs,	- - - -	2 drachms.
Sub-Nitrate of Bismuth,	- - - -	$\frac{1}{2}$ "
Mucilage of Gum Arabic,	- - - -	$\frac{1}{2}$ fl. ounce.
Syrup,	- - - -	6 fl. drachms.
Water,	- - - -	6 fl. ounces.

Dose: a tablespoonful four times a day.

And in cases of chronic inflammation of the œsophagus, in union with carbonate of soda, as follows:—

R.—Powdered Cubebs,	- - - -	2 drachms.
Carbonate of Soda,	- - - -	$\frac{1}{2}$ "
Mucilage of Gum Arabic,	- - - -	6 fl. drachms.
Mint Water,	- - - -	6 fl. ounces.

Dose: tablespoonful every hour.

At another time I shall consider further the uses of Cubebs and the formulæ for their convenient administration, and also the various formulæ published for the preparation of a fluid extract—a form of preparation the most convenient of any now in use, and which should be so prepared as to represent all the medicinal properties of the article.

A.

The Cinchona Alkaloids and Their Salts.**QUINIDIA.***(From Parish's Practical Pharmacy.)*

This name is now generally applied to an alkaloid which is isomeric with quinia, but differs from it in turning polarized light to the right. It occurs, in company with the other alkaloids, in many cinchona barks, particularly those imported from New Granada.

It is obtained from its sulphate by decomposition with ammonia, and crystallizes in shining, colorless efflorescing crystals, which are readily reduced to a white powder; they melt without decomposition, and, on cooling, concrete into a grayish-white crystalline mass. When ignited, they burn with the odor of kinole and the volatile oil of bitter almonds; they have a less intensely bitter taste than quinia. This alkaloid is nearly insoluble in water, soluble in twelve parts of alcohol and 143 of ether, and its solution turns to a green color like quinia when successively treated with chlorine water and ammonia; a solution of either alkaloid even in 700,000 parts of water, according to Herapath, shows a dispersion of light with a bluish milky coloration. Quinidia, treated with tincture of iodine under the same circumstances as quinia, yields crystals which appear garnet red by transmitted light, and bluish red in reflected light. Quinidia is the only cinchona alkaloid yielding, with the solution of an iodide, a nearly insoluble precipitate, hydriodate of quinidia.

Quinidia Sulphas is more soluble than sulphate of quinia, and remains in the mother liquor after the quinia salt has been crystallized. When the cheaper barks above referred to are manipulated with, this salt is an important product; it is largely produced, and by some used as a substitute for quinia. As generally found in commerce, it contains cinchonidia, and comes in long, shining white crystals, interlaced, and resembling those of sulphate of quinia. It is soluble in 130 parts of cold water, freely soluble in alcohol, and almost insoluble in ether. It contains six equivalents of water of crystallization.

Cinchonia.—This is another unofficinal alkaloid usually accompanying quinia. Huanuco bark contains almost exclusive cinchonina, which, when first isolated from this bark, was called huanucina, under the supposition of its being a distinct alkaloid. It may be obtained from this bark by a process similar to that for the preparation of quinia. It is in white needles, insoluble in alkalies, ether and cold water, but soluble in thirteen parts of boiling alcohol; chloroform dissolves 4.3; olive oil, one per cent of cinchonina. It is less bitter than quinia and quinidia, fuses at 330° to an amorphous mass, and at a higher temperature partly sublimes without decomposition; polarized light is deviated to the right.

Its salts are generally more soluble than the corresponding salts of quinia; they are precipitated by the caustic alkalies and their carbonates; and in not too diluted solutions the bicarbonates likewise cause a precipitate after the

previous addition of tartaric acid. Under similar circumstances cinchonia does not produce the reaction of quinia with chlorine and ferrocyanuret of potassium. The precipitate of ferrocyanide of potassium in cinchonia salts is insoluble in an excess of the precipitant, but crystallizes from its hot solution; its composition corresponds with the quinia salts. The cinchonia sulphate, if treated with iodine similarly to sulphate of quinia, yields a brick-red deposit.

Cinchonia Sulphas.—If cinchonia occurs in barks with quinia and quinidia, this salt remains behind in the mother liquor after the crystallization of the other sulphates.

It crystallizes in white pearly oblique prisms, containing $2H_2O$, soluble in fifty-four parts of cold water, in seven parts of alcohol, not in ether. On the addition of sulphuric acid it passes into the very soluble acid sulphate. The other salts of cinchonia may be prepared like the corresponding quinia salts. The following have been occasionally used:—

Cinchonia murias is in silky prisms, easily soluble in water and alcohol.

Cinchonia hydroiodas crystallizes in needles.

Cinchonia tannas is a yellowish powder, soluble in alcohol.

Cinchonia Acetas.—If acetic acid is saturated with cinchonia, on evaporation granular or scaly crystals of the acetate are left, which are easily soluble in water.

Cinchonidia often constitutes the greatest part of commercial quinidia; as it contains no water of crystallization, it is not efflorescent in the air.

Its principal peculiarities are: solubility in ether, deviation of polarized light to the left, and no reaction with chlorine water and ammonia. By Dr Herapath's test, viz: treating with iodine like quinia, the resulting iodosulphate of cinchonidia is so similar in appearance to the corresponding quinia salt, that it can only be distinguished from it by a little difference in the tint caused by transmitted light.

The base discovered by Wittstein, and called by him cinchonidia, is a mixture of various alkaloids, but principally of cinchonia and Pasteur's cinchonidia.

Quinicia and Cinchonicia.—The acid sulphates of quinia or cinchonia, if heated for three or four hours to about 250° or 266° , are converted into alkaloids, isomeric with the original bases, the former into quinicia, and the latter into cinchonicia, and but very little coloring matter; the neutral salts suffer partial decomposition at that temperature after melting. Both are nearly insoluble in water, soluble in alcohol, easily combine with carbonic acid, deplace ammonia from its salts, and deviate the polarized light a little to the right. The optical behavior of the different alkaloids, therefore, is as follows:—

Quinia, considerably to left.	Cinchonia, considerably to right.
Quinidia, " right.	Cinchonidia, " left.
Quinicia, feebly right.	Cinchonicia, feebly right.

Chinoidina, or Quinoidina, is a product of alteration of the cinchona alkaloids. Drying of the barks, or exposure of solution of alkaloids to the sun, and the influence of a high temperature, appear to favor this alteration. It is

prepared by precipitating the mother liquor, from which the sulphates of the other alkaloids have been crystallized, by carbonate of soda, and extracting with alcohol.

It is a reddish-brown, resin-like mass, entering into combination with acids like the unaltered alkaloids. The salts are resinous, uncrystallizable, very bitter. It is isomeric with quinia, and has, therefore, been also called amorphous quinia. Pasteur supposes it to be uncrystallizable quinicia and cinchonicia.

It has strong febrifuge properties, and is very efficient in doses double of that of the sulphate of quinia, either in pills or dissolved with a little sulphuric acid.

Precipitated Extract of Bark is the same preparation as the above. It differs from the *extractum calisayacum*, referred to on page 186, by not containing the crystallizable alkaloids.

Of the remarkable principles above described as existing in cinchona barks, cinchonina was the first discovered, having been isolated in an impure state as early as 1808, and fully described as an alkaloid by Pelletier and Caventon in 1820. Quinidia was discovered soon after by the same chemists. Not until 1838 was the existence of quinidia announced. In that year, Henry and Delondre announced its discovery, but afterwards abandoned the idea of its being a distinct principle; so that no further attention was bestowed upon it until, about the year 1844, the celebrated German chemist, Winkler, investigated its properties, and conferred upon it the name quinidine, which, to correspond with our nomenclature, is changed to quinidia. Pasteur has since proved that quinidia, as it occurs in commerce, is generally composed chiefly of another alkaloid, to which he gave the name cinchonidia; he likewise discovered the artificial isomeric alkaloids quinicia and cinchonicia.

On page 407 will be found an account of other similar alkaloids, discovered in particular barks, and most of them not fully investigated.

The former scarcity and high price of sulphate of quinia, occasioned in part by the restrictions placed upon the trade in genuine Calisaya bark, by the Bolivian government, had the effect to direct the attention of physicians to other and similar remedial agents; but, notwithstanding the frequent announcement of favorable results from the trial of such, there seems a general disposition to withhold confidence from any but the products of that remarkable family of South American trees, whose history has been so long connected with the cure of periodical diseases. The introduction into commerce of large quantities of cheap cinchona barks, from new sources, has been another result of the long-continued scarcity of the older and official kinds. Notwithstanding these have been regarded by many with jealousy, and doubts have been entertained of their therapeutic value, the study of their chemical history has shown that some of them are not less rich in alkaloids than the finest monopoly barks, and experiments in regard to the therapeutic value of their characteristic alkaloids have shown a close resemblance in physiological effects to quinia itself. Some Bogota barks are now extensively employed for

the manufacture of quinia, the price of which has, in consequence thereof, considerably decreased; these barks, beside the other alkaloids, abound in quinia.

Dr. Pepper, and other practitioners connected with hospital practice, have used sulphate of quinia in the same or less doses than the quinia salt, and with equal success; and its value and efficacy are confirmed by the experience of others in private practice.

Sulphate of cinchona, which had been generally overlooked, has also been much used of latter time as a substitute for the quinia salt; and, although some physicians assert that larger doses of it are required, I am told by Dr. Conrad, the apothecary of Pennsylvania Hospital, that in that institution the three cinchona alkaloids are used indiscriminately, and in the same doses. Through Dr. R. P. Thomas, I am informed that the cinchona salt has been used with satisfaction as a substitute for that of quinia in the Philadelphia and Northern Dispensaries, in the Western Clinical Infirmary, and Philadelphia Hospital, Blockley, where many intermittents are daily under treatment.

[TO BE CONTINUED.]

Discussions on Diphtheria.

PROCEEDINGS OF THE CINCINNATI ACADEMY OF MEDICINE. REPORTED FOR THE JANUARY NUMBER OF THE LANCET AND OBSERVER, BY DR. J. A. THACHER.

Prof. COMEGYS introduced the subject of diphtheria for discussion, in which a large number of the members participated.

Prof. C. stated that, within the last month or so, he had met with quite a number of cases of this disease in his practice. As met with by him, it was characterized by soreness of the throat, swelling of the uvula and tonsils, with deep ash-colored ulcerations on the latter—the ulcerations being more remarkable for their depth than the extent of surface they covered. In none of the cases was there any fever; indeed, he considered the disease quite distinguished for the little arterial excitement manifested in it.

In many cases he had seen, the ulceration appeared to commence at first on one tonsil, and then to be communicated, as it were, to that of the opposite side by juxtaposition. In but few cases was the larynx affected, and then but slightly; in nearly all, however, the pharynx was more or less involved, and in a few instances the ulcerations were wholly confined to it.

The disease, he said, was frequently very insidious in its progress. The constitutional symptoms were often so very slight that he had known it to make very considerable progress before its invasion was suspected. In some cases, a little soreness of the throat, or slight difficulty in swallowing, was the only symptom complained of. He had now under treatment a young lady, some eighteen years of age, who had had the disease several days before she

or her friends were aware of it. Previous to her attack the mother and a little brother had been affected; the case of the former, however, was slight, yielding readily to common gargles. On examination he found the whole throat inflamed; the uvula was swollen and dropsical, and at its extremity clubbed, and upon corresponding points of each of the tonsils there was a deep ash-colored ulceration. There were no constitutional symptoms whatever.

Previous to seeing her, she had been using for the slight soreness and difficulty she experience in swallowing, a chlorine wash that he had prescribed for her brother. The case representing rather a serious aspect, he made an immediate application of the solid nitrate of silver to the throat, cauterizing the ulcers freely, and ordered a wash consisting of a strong solution of the same in water. Afterwards he substituted the hyposulphite of soda, as recommended to him by Dr. Heighway. His internal treatment consisted in the administration of iron, beef tea, and wine whey. The throat symptoms are now improving.

At one time he collected some of the exudation from the tonsils and placed it under his microscope. He was, however, unable to discover anything but simple pus cells, in which were some fibres of vegetable matter, which he thought probably might have been detached from his handkerchief while cleaning the instrument.

In some instances he had known this disease to terminate fatally, within twenty-four hours of its invasion, in slough. He related the case of a little boy he had lately attended, who died of this complication within a few hours after his attack, and almost in the midst of his play.

The Professor related several other cases he had met with, illustrative of the character of the disease, its insidious course, and often fatal termination when least expected. Among others, he mentioned the case of a young man affected with the disease, in which the whole soft textures of the mouth and throat became covered with a grayish-white exudation of a sphaclated appearance. Indeed, so gangrenous in appearance were all the textures, that he and Dr. T. Wood, who was called in consultation, were inclined to think that gangrene had taken place. In a short time, however, this membrane became detached, disclosing the inflamed surface of the textures beneath. The patient died.

In his treatment he was in the habit of applying topically caustics freely to the throat, as the nitrate of silver in substance, or a strong solution of it in water. Sometimes, when the ulcerations were deep and extensive, he touched them with strong nitric acid, by means of a brush. In some cases he had employed, with considerable benefit, inhalations of tannic acid dissolved in sulphuric ether. This formula was:—

R.—Tannic acid,	f. ʒ ij.	
Sulph. ether,	f. ʒ j.	M.

With this a cloth was wetted and placed in the mouth.

He based his internal treatment on general principles, always being careful

to husband the strength of the patient. When indicated, he administered tonics and stimulants freely, as iron, bark, wine, &c., with nourishing diet.

Dr. HEIGHWAY said that Dr. Leidy had demonstrated, by means of the microscope, the identity of the exudation in diphtheria with that of the fungi of the yeast plant. Sulphurous acid was peculiarly destructive to it. On account of its very soon decomposing when uncombined, it was used in the form of a salt, as the hyposulphite of soda. Two drachms of tannin to a pint of glycerine, applied by means of a probang, had been used with the best effects.

Dr. W. JUDKINS observed that he thought much injury was often done by caustics. He, for his part, never employed them. A gentle stimulant, in the form of a mild lotion, was all that was necessary in their topical treatment. His favorite formula was eight grains of the iodide of zinc to an ounce of water.

The old maxim "*ubi irritatio, ibi fluxus*," he believed was correct, and as caustics were undoubtedly irritants, their effects must be rather to excite inflammation than to subdue it. He had learned from observation, that when an eschar was removed from a cauterized ulcer, there would be disclosed beneath an ulcer larger than the first. If, then, cauterization be the rule, it must be done again and again, and he could not see when it was to terminate.

Dr. BONNER, Sr., following in some remarks, said that he could not agree with Dr. Judkins in his views of the effects of cauteries. He himself did not consider them irritants, nor could he understand how they could act as such. The action of nitrate of silver, one of the so-called cauteries, upon an ulcer, according to his experience, was not to irritate it or burn it, but, besides stimulating it to healthy action, to coagulate the pus and other secretions, so as to form a scab under which granulations might spring up.

Further, he remarked, he believed that many of the cases of sore throat now prevailing were improperly called diphtheria; that many of them, if not the majority, were nothing more than the ordinary affections produced by cold. He was rather inclined to think that the *European trips* of some of the professional brethren had made them somewhat dissatisfied with such old names as quinsy.

The Doctor related several cases in his practice of throat affection, one of them a woman that was attacked immediately after confinement, that yielded to common astringent and stimulating gargles, which he thought probably many would have considered cases of diphtheria. He himself, however, could not see anything more peculiar in them than in the sore throats of *old times*.

Prof. COMEYNS said that he explained the beneficial action of cauteries upon ulcerations by their substituting an inflammation of their own in place of the diseased one. He did not think an increase of inflammation followed their use—rather a change in character.

Dr. WHITE reported several cases of the disease he had met with. He treated them successfully with iron, chlorate of potash, and astringent gargles. In several of them the external glands were much swollen; in one case

particularly the whole of the glands beneath the jaw were so much swollen as almost to prevent the slightest opening of the mouth. All external applications that he employed in the form of liniments, tincture of iodine, poultice, &c., appeared to be of little or no benefit.

Prof. MENDENHALL stated that in such cases he had frequently derived considerable benefit from the application of the tincture of iodine and poultices of slippery-elm bark.

Prof. M. reported a case of croup that supervened upon an attack of diphtheria. The remedies usually employed in that disease were used—the patient recovering.

Dr. STEVENS stated that he had recently received a letter from a very intelligent physician near Pomeroy, Ohio, detailing the symptoms of an epidemic prevailing in that vicinity, which, from the features described, was undoubtedly diphtheria. One marked peculiarity of the epidemic described was a loss of strength and power of locomotion attendant upon a large proportion of the cases, after recovering from the acute symptoms. Dr. S. said that he had observed accounts of this same sequel to diphtheria related in the medical journals of the day, and inquired if the gentlemen present had observed such results in any of the cases which they had treated.

From the New York Times, Jan. 6.

DISCUSSION ON DIPHTHERITE IN THE NEW YORK ACADEMY OF MEDICINE.

The President, Dr. J. WATSON, stated what was especially desired was the differential diagnosis of croup in its varied forms, and called upon Dr. Douglass as having particular experience in those classes of diseases.

Dr. DOUGLASS stated that he divided croup into spasmodic inflammatory with false membrane, and diphtheritic, and proceeded to describe the peculiarities of the latter, which differed markedly from that of the other classes. Especially there was a discharge from the nostrils of a profuse, somewhat colored secretion; the countenance was flushed, very differently from the color in croupy pneumonia, but of a yellowish-red color. The sound of the cough was moist, and in croup sonorous and metallic. The breathing is not difficult, as in croup, but there is an utter prostration of all the powers. The treatment of diphtheria was the opposite to that of croup. He thought it possible that large doses of calomel might be of utility in inflammatory croup, although he had never given it; but the treatment of diphtheria should be sustaining—quinine and iron—and as it was a blood disease, he considered calomel particularly inadmissible. He approved of topical applications to the throat, and if emetics were necessary, those should be given which were mechanical, acting without prostration.

Dr. BARKER had seen this disease last year in Albany and Troy, but none in New York till this last fall. He thought that it was now the general idea that it was a blood disease, with a local development affecting the throat and

nares generally, and with an exudation of false membrane. He had seen it in especial localities, and in that region there were also cases where the membrane was exuded on mucous surfaces other than the throat, and related a case of this character marked by great rectal and vesical tenesmus, overcome only by chloroform and injection of solution of nitrate of silver. Chlorate of potassæ and quinine in full doses was the treatment he had used, particularly in some cases seen with Dr. Jacobi. There was a tendency to a destruction of tissue, and debilitating emetics could not be well borne. He preferred the turpeth mineral, first recommended by Dr. Hubbard, of Maine, in 1840, which acted speedily and without prostration.

Dr. GARDNER resumed the discussion of diphtherite, by saying that he had seen some cases of the disease; and while he agreed with Drs. Douglass and Barker in the views they had expressed, thought they had omitted two distinct features peculiar to diphtherite; that it was not only epidemic, but eminently contagious, and that a disagreeable diagnostic smell always accompanied the flow from the nose. He thought that a vigorous tonic treatment and local application to the throat were demanded. The membranous exudation, he thought, differed from that of membranous croup by being less strong and tenacious, and not ever, in his experience, running down so as to make casts of the bronchi. He trusted that Dr. Jacobi, who had just entered, and who had a large experience in this disease, would give his views.

Dr. JACOBI thought that the main feature of the disease was the dissolution of blood, while the membrane, he thought, was not different in any respect from that in croup. He had seen it thrown off in all shapes and thicknesses—even one-eighth of an inch thick—from the tonsils; and although it was generally limited to the tonsils and velum palate, he had seen it on every mucous membrane of the body. Croup, he considered, to be merely the filling up of the air passages with fibrine, and did not thus differ from diphtherite. The latter, however, is an epidemic disease, which he had never known croup to be, but sporadic. He thought no one had ever seen more than a few cases in a year, while in dispensary, private practice and consultations, he must have seen between three hundred and four hundred cases within the last eight months. When the membrane descends into the trachea, he considered it to be croup. He sees no difference between the two diseases, except in the dissolution of the blood. Tracheotomy in this disease is never successful.

Dr. DOUGLASS inquired if he had ever found albuminaria, which the French state accompanied this disease.

Dr. JACOBI—He had examined the secretion of the kidneys in about fifteen cases, and had found it only in about twenty-five per cent, and in those only in the early stages of it. He had noticed the smell mentioned by Dr. Gardner in every case, but had never seen any such in croup, and considered this as important for diagnosis. He saw no utility in applying caustic to the membrane on which the membrane had exuded, and is of no value to the surface from which it has been thrown off; but he touched the parts around to prevent the inflammation from spreading. It took several days for the mem-

brane to become detached, and had never seen this hurried by the caustic application; besides, it does no injury upon the pharynx, never interfering with the respiration.

The general treatment in slight cases, upon which he relies, is the chlorate of potash, from a half to one drachm, in divided doses, per day, to a child from six months to four years old, and three drachms per day to those older. He thought that the treatment, though slight, is of the utmost importance, and should be continued for many weeks, and even months, with the addition of iron, (the muriatic tincture in preference,) as there is constant danger for a considerable period of the reappearance of the disease.

In severe cases the chlorate of potash is too slow when used alone, and he is accustomed to combine with it, or oftener precede it, by a few large doses of quinine. He preferred the solution in water with an addition of acid, because he had found that some cases did very well when treated by acids alone—generally the muriatic.

The severe cases of children, which came on very suddenly, are very apt to be fatal, from the overwhelming effect on the general system of the poison of the disease. It often reappears in children, after the lapse of three or four weeks even, and notwithstanding that the treatment has been kept up of quinine and iron, conjoined to a nutritious diet—beef tea, &c.—these cases generally ended with convulsions of a mild sort, but yet marked, although differing much from the convulsions attendant upon scarlatina.

Where the running from the nose was very excessive and offensive, he had been in the habit of making injections of a solution of chlorate of potash, and oftener of chlorate of soda, as the latter will dissolve in four parts of water, while the former requires sixteen. He had also repeated the experiments of French investigators, and was convinced that the latter is a better solvent of plastic exudations.

Dr. BARKER thought he had misunderstood the last speaker in his pathological views, and inquired if he considered, as he had inferred, that croup and diphtheria were the same?

Dr. JACOBI replied—By no means. Croup he considered a local disease, but diphtheria was a blood disease. The membrane, in each case, he had said was identical.

Dr. BARKER said that, therefore, there was no point of controversy between them. In croup, the local difficulty precedes the general disturbance, while the opposite is the case with diphtheria. In the latter, too, death rarely occurs from obstruction of respiration, as is the case almost always with the former.

The President was happy in having elicited this valuable discussion, because of the discrepancy of the statements of writers abroad—some stating that croup was contagious, while others ridicule this opinion. He drew the attention of the Academy to the writings of Guersant in the Dictionary of Medicine, and the contemporary productions of English writers, &c. He thought that this subject was one of great importance, and it might be profitably continued.

Dr. DOUGLASS inquired of Dr. Jacobi respecting the distinction in the countenance in cases of croup and diphtheria—in the former being pale, and in the latter not exactly flushed, but suffused, of a yellowish red tint.

Dr. GARDNER had seen great swelling of the glands and sub-cellular tissue of the neck, and inquired of Dr. J. if he had noted abscesses in various parts of the body, as in the kindred disease of scarlatina.

Dr. JACOBI has noted the color of the face, and attributed it to the little disturbance in the respiration. Abscesses he had noted but a few times; one he particularly remembered, which threatened the life of the patient.

On motion of Dr. THOMAS, this subject was made the especial subject for discussion at the next meeting.

Dr. PEASLEE presented a new instrument for inhaling chloroform, and after the reading of the names of those elected on the various committees, the Academy adjourned.

From the New Orleans Medical and Surgical Journal, January, 1860.

DIPHTHERIA. BY S. M. BIGELOW, M. D., OF PARIS. COMMUNICATED IN A LETTER TO PROF. WARREN STONE, M. D., OF THE UNIVERSITY OF LOUISIANA.

MY DEAR DOCTOR:—I have committed myself in a recent letter to you, in answer to your kind favor of August 26th, in which you asked me to give you my views upon diphtheria, membranous sore-throat, or angine couenneuse, by promising to do so when circumstances would permit.

I assure you that I feel great diffidence in commencing this task at this epoch, when since two years this is the subject which has held, perhaps, the first place in medical discussion and observation among the highest medical intelligences in the world. What I have to say will be strictly confined to my own personal views upon the subject. This may seem to you presumptuous on my part, and following too closely the letter of your request, ignoring the spirit of it; but, on the other hand, it would be equally absurd for me to compile a natural history of the disease from documents written by able men during the past two years, which have been accessible to yourself and to other members of the medical profession in America and elsewhere.

So you will understand, my dear doctor, that I have no idea of giving a history of the disease to a novice in medicine, but my own views upon certain capital points in the disease *per se*, and in its relation to membranous croup, to a veteran in the corps (of which I am but a recruit), who knows both diseases better than myself, and will understand those views without description of the diseases in question. I have, then, but ideas to offer in outline, and will be brief.

In the first place, I tell you, as well as I can in words, some of the differences which exist, in my opinion, between the two diseases, membranous croup and angine couenneuse; but some of them are only to be siezed by the high faculties of the mind—words can only hint at those points which the

reason alone can feel. In one word, it can be felt, but not expressed in its essence.

Firstly, do you understand what I mean when I say that for me the same relative position exists between these two diseases as exists between the intermittent fevers with which you are so conversant in your part of the country and throughout the United States, and the Syrian and Roman forms of intermittent fevers? A difference in the intensity of the poison or ferment certainly, and most probably also in its nature, between the croup and diphtheria, and your congestive fever and intermittent, would be an exaggeration.

In the second place—and this is less transcendental, if you will pass me the word, than my first proposition—the croup, uncomplicated, kills the patient in but one way—by suffocation. The *angine couenneuse*, uncomplicated, may produce death in three ways: first, during the acute period of the disease, by suffocation; and after the disappearance of all membranous exudation in the larynx, even months after, by the effects of the poison or ferment exhibited in the progressive paralysis which almost always follows the recovery from the acute period of the disease, or by asthenia during an intermediate period. Of this peculiar difference between the two diseases, the consecutive progress in paralysis, I will write more at length later, for to my mind it constitutes an essential point.

In the third place, the croup is a disease which is almost exclusively confined to children, whereas the *angine couenneuse* attacks indiscriminately children, adolescents, and adults. You may say that this is a loose proposition. True, it cannot be proved by words to difference the nature of the two diseases, but it seems to me that mental discrimination must give the fact an important place in instituting a parallel between them.

I am about touching upon a ground, in my fourth proposition, which is so covered with eggs that I hardly dare cross it on tiptoe! You will appreciate my hesitation, if you remember certain of our conversations together while you were in Paris, when I whisper in your ear that word which is to my mind what *bile* is to the mind of the community at large—a scapegoat for the generality of Nature's medical mysteries, contagion. Knowing my sentiments fully upon this subject, you may be disposed to regard the few words I have to offer upon this point as more serious than you would if they came from a contagious sectarian; for you know that I don't believe that a medical *sectarian* can be a sound man, any more than I do that a *religious* sectarian can be a religious man. The croup occurs frequently sporadically, more frequently as an epidemic, but I think a few are disposed seriously to consider that it is ever propagated by mediate contagion. Diphtheria *rarely* occurs as a sporadic disease, almost invariably as an epidemic; and now, my dear doctor, I shut my eyes and make my profession of belief: if there exists a mediately *contagious* disease on earth it is the *angine couenneuse*, and that the epidemics of this disease are or may be contagious epidemics. I admit this belief, by no means losing sight of atmospheric influences, which are greater, in my opinion, than all others in the development and propagation of the disease,

but simply to acknowledge that I believe it to be endowed with a highly contagious element. This is an opinion founded upon the fairest observation of which I am capable, and by no means a theoretical convenience.

My fifth proposition regards the mode of invasion of the two diseases. Membranous croup commences insidiously, and ordinarily several days elapse before the symptoms awaken serious apprehensions in the minds of those who surround the patient. The angine couenneuse, on the other hand, enters upon the field with a certain conquering magistracy, as a general rule, which leaves no time for parley. The first symptoms are ordinarily, with the exception of the soreness of the throat, those which announce an invasion of typhoid fever, general lassitude (the patient expresses it better than I can in classical professional language by informing you that he feels sick all over), to which are added pains in the head, back and limbs, accompanied by a febrile movement for the most part quite intense. The disease carries the typhoid type with it, if you will permit me the expression, throughout its entire course, and, if possible, this element is more marked during the convalescence, which is always an affair of several months, than during the acute period of the disease. In your letter to me, announcing your sad affliction for the death of your dear boy from this disease, you made a remark which proved to me again your high medical sagacity, for you had seen but two or three cases as yet in New Orleans from which to form your opinion. It was, that you considered it to be "evidently as general and as much a blood poison as the New England typhus." It is most certainly that, and it is *more*—it is deeper and more deadly.

With regard to the treatment of this terrible malady, my views are, to a certain extent, in accordance with those generally professed to-day. It is of an absolute necessity, in my opinion, to apply a mixed treatment, general and local, from the commencement. I would much sooner abandon the latter—surgical treatment—as a means of prolonging life and giving a larger trial of general treatment excepted than the former. It is evidently a typhoid disease, and as such must be treated from the start—it is a septic disease, and as such must be combatted at the earliest moment; it is accompanied by local accidents, and they must be treated as they present themselves. First, then, I advise at my first visit an insufflation of a drachm of very dry powdered burnt alum, whether I find a commencement of the plastic deposit on the tonsils or in the pharynx, or not—you will always find the fauces and tonsils inflamed, and ordinarily a commencement of the deposit in some locality in the throat. Even if I find it already considerable, my treatment is the same. At the same visit I also advise a tepid bath, of an hours' duration at least, and more frequently of two hours, and a purge of citrate of magnesia (purgative lemonade), six or eight drachms in solution, and dose to be repeated every two hours until it operates. This is to prepare the patient for what is to follow, by cleaning the intestines of whatever load of matter they may contain, activating the secretions of the entire canal, and irritating the absorbents, if I may so speak, to a more rapid action upon the general medication to follow. The

bath is of eminent service in revivifying the powers of that immense organ, the skin, and activating its functions. I can't pretend to explain how, but you will see and feel it as clearly as myself. I prefer the alum as a topic most decidedly to nitrate of silver, as it forms no eschar to blind you at your next visit with regard to the exact state of things in the throat, and also because I have found it really more potent in its good influence as a local application. The tongue is to be held down with a large spoon, and the alum blown in through a single glass tube, six or eight inches long, and one-fourth of an inch in diameter, at the moment when the presence of the spoon in the fauces causes the involuntary act of gagging on the part of the patient. This insufflation I order to be continued every hour until my return. Its frequency must always be determined, however, by the sagacity of the physician, the gravity of appearances taken into consideration. I rarely order it less often than once in two hours. Having thus prepared my patient, I commence immediately upon my general treatment, which consists in the administration, every three hours, of ten grains of the chlorate of potash, and ten grains of the bichlorate, dissolved in some convenient vehicle, with the administration ordinarily with one-tenth of a grain of calomel in sugar, dry, upon the tongue, every hour or every two hours, stopping and recommencing its administration according to circumstances, which can only be explained or appreciated by the physician at the bedside. This is a proper moment to lay before your consideration a question which has been recently agitated in the medical world, viz: if in the simultaneous administration of calomel and the chlorate of potash, the effects of the latter do not counteract in a measure, or destroy entirely, the specific effects of the former? For my own part, I am prepared to say that although it may retard or prevent, for aught I know, the specific effects on the salivary glands, I do not believe that it modifies, in any way, its effects upon the secretions. This opinion is based upon many, and some very recent observations. However, as we know nothing positively about the matter, I generally suspend the one and the other alternately for twenty-four or thirty-six hours at a time during the course of the disease, in order to profit, if possible, by the doubt. I always remove with long forceps, or by scraping, or by any other means, violent or gentle, all accessible portions of the pseudo-membranous deposit, in order to allow the topics to act as directly as possible upon the secretory surfaces, and also to prevent as much as may be the accumulation of a thick, hard deposit, which would act as a serious mechanical obstruction.

[TO BE CONCLUDED IN NEXT NUMBER.]

OXYTOXIC.—The administration of the Indian hemp seems markedly and directly to increase parturient action, and Dr. Churchill states that it possesses power similar to those of the ergot of rye in arresting hemorrhage, when dependent upon congested states of the impregnated uterus.—*Braithwaite's Retrospect.*

Veratrum Viride and Chlorine in Yellow Fever.

[Our valued friend and *confrere*, Dr. E. D. Fenner, of the New Orleans School of Medicine, left for Europe on the 14th of May. On board the steamer which bore him hence, it will be seen that his mind still dwelt on home and its medical interests, and he has furnished the following letter to Dr. Brickell, which will be read by all who know him:—]

MY DEAR COLLEAGUE:—As some practitioner may desire to try the new treatment for yellow fever which I brought to the notice of the profession in the October and November numbers of our Journal last year, I have concluded, before quitting the country, to leave you some plain directions for carrying out the same.

I repeat what has been said before, that I think we have in the *veratrum viride* and chlorine mixture, medicines which are fairly entitled to be *considered remedies for yellow fever*. They will at least fulfill the following indications, viz: *completely control febrile excitement, and keep up the secretions of the liver, kidneys and skin*. Now, these are not *all* the indications that are presented in yellow fever, but they certainly are the principal ones, and those to which our remedies are chiefly directed. If the febrile excitement be very moderate, the V. V. will hardly be called for.

My directions, in brief, are as follows:—

At the commencement of the attack, order a hot mustard foot-bath, and evacuate the bowels with a mild cathartic, such as castor oil, citrate of magnesia, or Seidlitz powders. If the stomach be irritable, with bilious vomiting and a coated tongue, give a gentle emetic of ipecac, or salt and mustard.

After this, if the fever be high, give five drops of the V. V. in a little water, every four hours, till the pulse be brought down to seventy, when the V. V. will be stopped, or the interval between the doses prolonged, so as to keep the pulse at seventy. At the same time begin with the chlorine mixture, and give two table-spoonsful every four hours—thus V. V. at 2, chlorine at 6; V. V. at 8, chlorine at 10 o'clock, &c. If the fever be moderate from the first, the V. V. may be dispensed with, and the chlorine alone relied on, and given more frequently, say every second hour. These doses are for adults. Children, even sucking infants, bear the chlorine well, but the V. V. should be very cautiously given to them.

The repetition of foot-baths, sinapisms, spongings, enemata, &c., must be left to the judgment of the practitioner. I have no doubt that quinine, in some way, would be a valuable adjunct to these remedies; but will not direct it at present.

The following is the chlorine mixture:—

℞.—Acid. hydrochloric,
Aqua distillata, aa. ʒ ii.
Mix, and add
Potass. chlorat., ʒ ii.

76 *Tincture of Capsicum for Chilblains and Toothache.*

Let this be labelled and kept on hand. For use, prescribe as follows:—

R.—Chlorine mixture, 3 ii.
 Aqua distillat, o. j. M.

S. Give two tablespoonsful every two or four hours (*pro re nata*).

For drink, I like orange leaf tea, lemonade and barley water. Covering: generally one blanket. Do not rise up in bed after the first day, until fairly convalescent.

With these two remedies as my main dependence, in twenty-five cases of the bad epidemic last year I only lost two—one a lady, who was delivered at the critical stage of the fever; the other a very delicate lady with no recuperative energy.

Dr. W. E. Kennedy told me he treated fifteen cases with these remedies, and lost but one.

Dr. C. Beard treated eight cases, and lost none.

Dr. S. Choppin treated eight cases, and lost none.

Other physicians told me they had tried these remedies, with happy effects. I hope others will try them, if yellow fever should again appear in any of our cities or villages.—*Southern Medical Journal*.

Tincture of Capsicum for Chilblains and Toothache.

By Dr. A. Turnbull.

My plan of treatment is simply to saturate a piece of sponge or flannel with the concentrated tincture of capsicum, and to rub well over the seat of the chilblains, until such times as a strong tingling and electrical (?) feeling is produced.

This medicine possesses an extraordinary power in removing congestion by its action upon the nerves and circulation.

This application ought to be continued daily until the disease is removed. Relief will be experienced on the very first application, and frequently there will be a total removal of the disease after the second or third. This, of course, depends upon the severity of the case. This embrocation when rubbed never produces excoriation, if the skin is not broken.

The manner of using it for toothache is by putting a drop or two of the tincture on cotton, and applying it to the part affected, the relief will be immediate. The following is the formula:—

R.—Tinctura capsici concentrata.
 Capsici baccarum, 3 iv.
 Spiritus vini rect, 3 xij.

Macera per dies septem et cola.

It may also be made with advantage by displacement.—*Medical Gazette*.

Editorial.

PROCEEDINGS OF THE AMERICAN PHARMACEUTICAL ASSOCIATION, AT THE EIGHTH ANNUAL MEETING, HELD IN BOSTON SEPTEMBER, 1859.—We have just received this volume, containing over four hundred pages of closely printed matter. The style, general appearance, and execution of the work reflects much credit upon the Committee having this duty in charge.

As very truthfully stated in the prefatory note, the amount of matter it contains, if printed like the reports of many Associations, it would make a volume of 1,000 pages.

There is scarcely a report or essay in the entire volume which is not of such a practical character as to make it valuable as well as interesting to every member of the medical profession—subjects upon which they should be well informed; and we are quite sure they cannot do so at less cost than the Committee offer this work, in handsome library style.

The reports of the Committees

On the Progress of Pharmacy,

On Weights and Measures,

On the Revision of the Pharmacopœia, and

On Home Adulterations,

are very full and valuable; that on weights and measures, upon which much discussion has occurred, is very full, and will amply repay a perusal.

Among the special and volunteer reports on scientific subjects and essays are many valuable scientific papers, evincing much interest on the part of apothecaries in the general objects and aims of the Association. To these we shall refer more particularly at another time.

Those wishing to procure the work can address the President, S. M. Colcord, or Charles T. Carney, Boston, inclosing *one dollar for the book and twenty-five cents for postage*, who will forward the same by mail.

SCARLATINA.—In reply to several letters inquiring what preparation of ammonia was used by Mr. Witt, we state, that the article in *Braithwaite's Retrospect*, vol. 38, page 17, is not clear. We should infer that the sesqui carbonate was used, as Dr. Rogers, in the London *Lancet*, of the reprint of June last, refers to that article as recommended by Mr. Witt, and states that his experience does not agree with Mr. Witt. The hydro-chlorate has also been tried in cases of scarlatina, with varied success, depending upon a variety of coincidents.

Dr. McGugin, of Iowa, in referring to the use of ammonia in this disease, says that instead of it he has used, in an epidemic of scarlatina, during the present winter, chlorate of potassa, in combination with veratrum viride; it was of the anginose variety, and every case was controlled in a few days. He gave the veratrum with the solution of chlorate, each in doses appropriate to the age of the patient, using the salt as a gargle.

Dr. Bostwick mentions a number of cases attended with high fever, and

pulse 120 to 140; some of them delirious on his first attendance. He treated all with *veratrum* and tonics, also applied sinapisms to the throat. In some attended with cough and excessive secretion of mucous, he vomited the patient by one or two additional drops, with great relief.

In several cases of this disease, which the writer has treated within a few weeks, all successfully, without witnessing one unfavorable sequence, he has relied mainly upon *veratrum*, *quinine*, *citrate of iron*, *brandy or whiskey*, *nitrate of silver*, and *chlorate of potassa*.

In one patient the disease was ushered in by alarming symptoms—great exhaustion of the vital energies, constant nausea and frequent vomiting, occasional lipothymy and spasms of the muscular system, with difficult respiration; pulse scarcely perceptible. Stimulants were immediately given in liberal doses—quinine, in two-grain doses, every three hours; citrate of iron, in two-grain doses; intermediate each dose of quinine; whiskey was given every thirty minutes, and the patient allowed the free use of ice. At first, to secure a free movement of the bowels, and keep up the renal secretions, extract of colchicum was given, in half-grain doses, every two hours, and continued until the object for which it was given was fully accomplished, and then discontinued entirely. No other cathartic medicine was given during the disease, the bowels, if necessary, being moved by enemas. Solution of nitrate of silver in crystals, ten grains to the ounce, was applied to the throat, night and morning, for four or five days; after which gargles of tannin and chlorate of potash, &c., were used. Inhalations of ether and tannic acid were used the first few days, with much relief.

It was necessary to continue the *quinine*, *iron* and *whiskey*, giving at proper intervals *iodide of potassium* during the first ten days, after which discontinued the *iron* and *potassa*, and continued the *quinine*, in one-grain doses, once in four hours, and *whiskey* every hour. This was kept up until the fifteenth day, and then gradually discontinued. Allowed the patient all the nourishment that the stomach would retain. I ought to have stated that during the first eight or ten days of the attack the patient was quite unconscious. A course of treatment less stimulating, or by abandoning early the quinine and iron, I am well satisfied would have been death to the patient. The case is peculiarly interesting, as it required for so long a time the frequent doses of stimulants and tonics.

The pulse on the second day was 120, when *veratrum* was given, two to four drops, every three to four hours, to reduce and keep the pulse between eighty and eighty-five, with the desired effect.

Drs. Babbington and Hughes, after long experience, were convinced that when the brain symptoms, which are so generally fatal, supervene during the convalescence of scarlet fever, there is no remedy more efficacious than colchicum.

As the brain symptoms arise from the retention of urates in the blood, it occurred to me that, by giving it in the early stages of the disease, to prevent the supervention of uremia, the unpleasant sequences are avoided.

Prof. Bennett, of Edinburgh, thus recites his experience in the use of colchicum :—

"This was a very severe case of scarlatina. The angina was intense, occasionally rendering deglutition impossible. There was delirium on the third day, alternating at night with coma, which was often profound. The worst result was apprehended. It occurred to me that the head symptoms in this, as in several cases of typhus, might probably depend not so much upon inflammation of the brain, as is generally supposed, as upon the absorption of and poisoning by urea, an idea that appeared to me supported by the diminished quantity of the renal excretion, as well as its freedom from all deposit. Remembering the alleged virtues of colchicum in increasing the elimination of this excretion, I ordered it, in combination with diuretics, and the result was remarkable; for, on the next day, not only had the fever diminished, but the urine was increased in amount, and loaded with urates, to an extent and in form I had never previously seen. It may be argued that the fever had terminated by a natural crisis on the seventh day; but I cannot help thinking that in this case nature was assisted by the colchicum and diuretics. At all events, this medicine seems to me worthy of more extensive trial in scarlatina accompanied by diminution of urine and head symptoms."

J. B.

HYDROCYANATE OF IRON IN EPILEPSY.—We have received the following letter from Dr. Bailey, of Iowa, which we publish with pleasure, as it relates to the recovery of a case of long standing, and one regarded as hopeless. Dr. Bailey is a retired physician, and one of the most substantial men of that State, having held several important offices under the General Government, and now represents his district in the Senate of Iowa. It is now fourteen months since his son has had a paroxysm :—

VERNON, IOWA, January.

Messrs. Editors:—Observing in your excellent Journal many inquiries in relation to the success in the use of the hydrocyanate of iron, I have to state that in the hands of Prof. D. L. McGugin, of Keokuk, in this State, not less distinguished at home as a philanthropist than throughout the country as an eminent physician, I deem it a duty I owe to suffering humanity to give a statement of a case in my own family—an *only son*—in which he has effected an entire cure, by the use of that medicine, in that terrible of all diseases, epilepsy, after a standing of more than seven years. My son, for the above length of time, had convulsions, at intervals of from three weeks to two months, with such severity as materially to impair his memory. In fact, I had but little hope that he could be saved from the ordinary consequence of that disease—loss of reason.

Every remedy was employed that medical skill could suggest for more than six years, without success; but finally, after laborious and patient research by the Professor, the hydrocyanate of iron was obtained, (I believe at your hands.) About four weeks after he gave it to my son, he had a very light paroxysm of the disease, and since that time, now fourteen months, he has not had the slightest symptom; is now as well as he was at any time prior to the first attack, and is performing the duties of postmaster at this place, beside acting as clerk in a store.

I hope that the Professor may deem it his duty to the profession, and to humanity, to give a detailed statement of this case to the medical public, that others may be induced to make trial of the remedy; and it is for this object and purpose, viz: to urge medical men to a trial of this drug, that I now report this case, and trust that in *every* case it may prove as fortunate as in my own family. I cannot close this communication without saying that no one can properly appreciate the deep sense of obligation my family feels to the Professor for his instrumentality in effecting this remarkable cure, unless it be a parent, a sister, or a brother to a patient similarly afflicted. In fact, a house of gloom and mourning has been happily changed to one of joy and happiness.

I am proud that medical science can furnish such trophies of its power to heal, and in this instance

I have chosen to express a double gratification, as a medical man—though retired from the active duties of the profession—and the joy of a parent, in the recovery of a son whom I once mourned as being beyond the reach of remedy and the power of the best medical skill.

Most respectfully, yours, &c.,

GEO. S. BAILEY.

TANNATE OF BISMUTH.—The *Bulletin de l'Académie de Médecine* contains a communication of Dr. Cap to the Academy of Medicine of Paris, in which he calls their attention to a new product, *tannate of bismuth*, for chronic diarrhoea, &c. The idea was suggested by the analogous and valuable properties of both—the one a pure astringent; the other possessing tonic properties, and a highly soothing influence upon irritated mucous surfaces, or when in a state of chronic inflammation, has been found highly valuable in dyspepsia, chronic gastritis, heartburn, diarrhoea, &c. A consideration of the medical properties of both readily suggest the value the combination may possess; it is stated to be without taste, and pleasantly administered.

Several cases of diarrhoea are stated in which the disease yielded with doses of two to four grammes, and twelve other cases where it was administered by other physicians in like doses. Cure was generally effected in two days. We shall give a full translation of this article, and whatever else may be published in the foreign journals, as we cannot but regard this as of equal, if not more value than other combinations, either of tannin or bismuth.

DIPHTHERIA.—We devote more space to the discussions in the New York and Cincinnati Academies of Medicine upon this epidemic than we usually give to a single subject, because our numerous correspondents have requested the latest information concerning its treatment. With a view of fully meeting this inquiry, we also publish the letter of Dr. Bigelow, of Paris, to Prof. Warren Stone, of the University of Louisiana, published in the January number of the New Orleans *Medical and Surgical Journal*, with the following note from Dr. Stone:—

DR. DOWLER: *Dear Sir*—The accompanying communication, on the subject of diphtheria, from Dr. Bigelow, of Paris, was kindly furnished at my request. When in Paris, a year ago, I had some conversation with the Doctor on the subject, and finding the disease in our city on my return, I wrote to Dr. Bigelow, and requested as a favor his experience in this destructive malady. No better authority could be appealed to; for he is an American, and received an American practical education, and then resorted to Paris to perfect himself, where he has settled in full practice and intimate relation with the leading members of the profession. I trust you will find it a valuable contribution.

Yours, very truly,

WARREN STONE, M. D.

BRAITHWAITE'S RETROSPECT OF PRACTICAL MEDICINE AND SURGERY.—The volume for January is just out, and may be had by addressing W. A. Townsend & Co., 46 Walker street, New York, and inclosing one dollar. It gives a condensed, well-written digest of most of the medical periodicals of Europe and America, and is one of the most valuable publications of the day. It has been in existence nearly a quarter of a century, and in a physician's library, as a work of reference, it may be said there are few superior to it.

FLUID EXTRACTS.—We are obliged to omit a communication considering the relative value of these preparations, with tinctures, &c., which we shall give in next number, as well as several other articles unavoidably deferred.

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Indigenous Tonics.

BY CHARLES A. LEE, M. D.

NUMBER III.

WE propose to treat of our indigenous vegetable tonics under the following heads, viz:—

- I. Simple or pure bitters.
- II. Bitter tonics, combining demulcent properties.
- III. Bitter tonics, with stimulant and diaphoretic properties.
- IV. Bitter tonics, with alterative properties.
- V. Bitter tonics, with laxative and deobstruent properties.
- VI. Bitter tonics, with sedative properties.

I.—PURE AND SIMPLE BITTER TONICS.

GENTIANA.

(*Pentandria—Digynia—Natural Order—Gentiana, &c.*)

The natural order Gentianaceæ embraces several of our most valuable simple bitters, such as the American centaury, American colombo, gentian, the buck-bean, &c. All the plants belonging to it are smooth herbs, with a colorless, bitter juice; opposite and sessile, entire and simple leaves; regular flowers, solitary or cymose, with the stamens as many as the lobes of the corolla, which is monopetalous, with persistent calyx; the stamens in-

serted on its tube. Of the nine genera belonging to it, in the Northern and Middle States, all have valuable bitter tonic properties. Species belonging to this genus are very widely disseminated over the globe, and are everywhere employed as stomachic and bitter tonics. The bitter principle resides in the roots in some genera, and in the stalks and leaves of others. Griffith states that they may be employed indifferently.

The genus *Gentiana* includes more than one hundred and fifty species, the greater part of which are found in temperate and cold climates, of which about twelve species are common to the United States—all endowed with similar sensible properties. Of these, the *quinqueflora*, *crinita*, and *saponaria* (*catesbaei*—Walter) are best known, and more generally employed. Analysis shows that their organic constituents are nearly identical. The *G. lutea* (yellow gentian), which is often found in hilly lands in this State and New Jersey, has doubtless been introduced from abroad. The *G. saponaria* (soapwort gentian) is a very beautiful plant, from twelve to eighteen inches high, with large, bright blue flowers, which appear in September and October; it is found from British America to the Carolinas, and is one of our most reliable species. The *G. crinita* (blue-fringed gentian) is also one of our most useful and interesting native plants; it is common in cool, low grounds, from Canada to Georgia. The stem is about one foot high, round and smooth. The *G. quinqueflora* (five-flowered gentian) is confined chiefly to our Western States. Three of our native species are annual, the others perennial. The sensible properties of the roots of all our native species are so similar to those of the officinal foreign species (*G. lutea*) as scarcely to be distinguished from it. This genus presents the singular anomaly, that while some of the species have five stamens and a five-cleft corolla, others have but four stamens and a four-cleft corolla, and others still a different number. Considerable confusion exists in regard to the names of the different species of gentian. For example, the *G. catesbaei* of Elliot and Bigelow, and which was first figured and described by Catesby, is the *G. puberula* of Michaux, Torrey and Gray; while the *G. saponaria* of the latter is the *G. catesbaei* of Walter. So, also, the *G. alba* of Muhl. and Gray is the *ochroleuca* of Sims, Darlington, &c. It may be well to recollect that the stem of the *G. saponaria* is smooth, while that of

the *G. puberula* (*catesbaei*) is rough.

Chemical Composition and Sensible Properties.—Your recent analysis of the root of the *G. catesbaei* of Bigelow gives, of—

Organic Matters,	-	-	-	-	-	94.00
Inorganic “	-	-	-	-	-	6.00
Total,	-	-	-	-	-	100.00
Gum, -	-	-	-	-	-	8.220
Albumen,	-	-	-	-	-	2.338
Starch,	-	-	-	-	-	1.988
Extractive,	-	-	-	-	-	3.019
Bitter Principle,	-	-	-	-	-	11.746
Sugar, -	-	-	-	-	-	8.156
Coloring Matter,	-	-	-	-	-	14.088
Resins, -	-	-	-	-	-	4.000
Bird Lime,	-	-	-	-	-	1.206
Soluble Salts,	-	-	-	-	-	1.094
Insoluble Salts,	-	-	-	-	-	4.708
Lignin, -	-	-	-	-	-	49.447
Total, -	-	-	-	-	-	100.000

It thus appears that the principal organic constituents are: gum, albumen, starch, bitter principle, sugar, coloring matter and resin. The sugar is of the crystallizable kind. The foreign species yields a concrete oil, and a crystalline substance, *gentisin*, which is described by some writers as *gentisic acid*. This is not the active principle, however, as was supposed by Henri and Caventou; for when free from impurities the crystals possess no bitterness, are colorless, feebly soluble in water, alcohol and ether, and very feebly acid in relation to vegetable colors and bases. Christison supposes that the active principle has not been isolated, but it evidently resides in the bitter extractive matter. Every species of gentian readily imparts its bitterness to water, cold or hot, to alcohol, diluted spirit, wine and sulphuric ether. The root has at first a mucilaginous and sweetish taste, which is speedily succeeded by an intense bitter. That water is a good solvent is proved by the fact that the infusion is as bitter as the tincture. No astringency is found in any of the species. What has been called *gentianin* seems to be a compound of the bitter principle, *gentianite*, and *gentisin* the crystalline and tasteless substance, as

pointed out by Tromsdorff and Leconte.*

Neither the salts of iron, nor the nitrate of silver, throw down precipitates in the infusion; the acetate of lead and the decoction of yellow cinchona bark, however, cause copious precipitates. Acids greatly diminish the bitterness of gentian, while alkalies increase the bitterness. Owing to the starch and sugar the infusion soon ferments and spoils.

Therapeutical Properties and Uses.—Gentian has been employed in medicine from a very remote antiquity, deriving its name, as is supposed, from Gentius, king of Illyria, who lived 167 years before the Christian era. It formed a part of the celebrated antidote of Mithridates, which was believed to protect the person taking it against all poisons whatever. But most of its imputed virtues were fabulous, such as its efficacy against poisons, the bites of the mad dog and venomous serpents, and its powers as an attenuant, deobstruent and diuretic.

Our native species of gentian possess similar properties to the foreign (*G. lutea*), which is in general use. In some parts of our country, particularly the Southern States, the blue gentian is very extensively substituted for the foreign article. It goes under the name of *Sampson's snake-root*, and is used in pneumonia with typhoid symptoms, and dyspepsia, and also as a stomachic tonic. There is no doubt that its medicinal virtues are fully equal to those of the European gentian. As a pure and simple bitter, gentian ranks next to quassia in its power of exciting the appetite and invigorating the powers of digestion. Given in health, it quickens the circulation and increases the temperature of the

* A few years ago a substance was imported under the name of *gentianine*, which was said to be the active principle of the gentian root of commerce. It was slightly soluble in cold water, but readily dissolved in boiling water; was yellow, inodorous, and possessed in a high degree the aromatic bitter taste of gentian. It was of a dark brown color, and was no doubt a very impure extract, containing sugar, gum, coloring matter, and the bitter principle. Dr. Carpenter, of Philadelphia, recommends the following process for the purpose of obtaining the pure bitter principle, which he also calls *gentianine*.—Digest the powder of gentian in cold ether, by which a strong green tincture is obtained; filter and pour into an open vessel, and, if sufficiently concentrated, a yellow crystalline mass will be deposited. Treat this with alcohol, filter and exposed to heat, the yellow crystalline substance appears, assuming at the close of the evaporation a solid mass, extremely bitter; treat this again with alcohol, evaporate to dryness, wash the residuum in water, adding a little calcined and well-washed magnesia, boil and evaporate in a water bath, and the bitter principle remains partly free and partly in a state of combination with magnesia, to which it imparts a yellow color. This is then to be boiled in ether and evaporated, and the bitter principle is isolated and comparatively pure. A *tincture* may be made by adding five grains of this extract to an ounce of alcohol, and is a perfect substitute for the official tincture of the root; a *syrup* also can be prepared by adding sixteen grains of it to one pound simple syrup.

body. In morbid conditions, to which it is adapted, as dyspepsia and other gastric affections, attended with torpor and debility, unaccompanied by irritation or inflammation, or inordinate susceptibility, it proves of eminent service, especially in combination with carbonate of ammonia. As a general tonic, also, in cases of feebleness and debility of the whole system, especially of the muscles, not dependent on organic disease, it is very beneficial. In intermittents, also, of a moderate grade, gentian, in combination with small quantities of tannin, will arrest the paroxysms, with considerable certainty. Cullen states that he never found it to fail in such cases, when combined with an equal quantity of galls and tormentil. We have used it with great advantage in some cases of atonic gout where there was considerable general debility, unattended with fever or gastro-intestinal irritation: also in hysteria and chronic menorrhagia under similar circumstances. Like all other bitter tonics, however, it will oppress and disturb the stomach in doses too large, causing nausea and vomiting, and acting as a cathartic by irritating the mucous membrane of the bowels. But in suitable doses, no such effects will follow. In amenorrhoea and chlorosis, it forms a very admirable remedy in combination with iron, especially in those chronic cases attended with symptoms of anæmia and debility of the digestive organs. In scrofulous affections, also, it is used with much benefit, especially in connection with chalybeate preparations or Lugol's solution of iodine. In prescribing it, however, as in all other cases, the name of the disease is of less importance than the general condition of the system, particularly of the digestive organs. In verminous affections it has long been celebrated, both as a prophylactic and a positive antidote. From the fact that quassia and colombo have been found to exert a specific effect on the cerebro-spinal system, and to possess narcotic properties, it has been surmised that gentian also might be found to have similar qualities. The experiments of Majendie* and Hartl,† however, to decide this point, must be regarded as unsatisfactory, inasmuch as the narcotic principle, if it exist, may be, and probably is, of a volatile nature, and the preparations they used were made with boil-

* *Formul.*, p. 818, 8me. edit.† *Wirk. d. Arzneim. u. Gifte*, bd. II., s. 808.

ing water. Now, it has been satisfactorily ascertained that the distilled water of gentian produces speedy intoxication, as well as violent nausea; and various writers, as Buckner, speak of the narcotic effect produced by gentian root, when no foreign substance could be detected in it. Pareira remarks that "facts support the opinion of Haller that gentian is not so innocuous as is supposed."* There is, however, no satisfactory evidence that any species of gentian is endowed with sufficient narcotic power as to interfere with its proper use as a tonic, or to render it in any marked degree injurious as a toxic agent. We believe that the poisonous effects mentioned by some writers, as in the *Phil. Transactions* for 1748, were caused probably by the roots of some other plants which accidentally got mixed with those of the gentian.

In regard to the question whether gentian can be used for a long time without injurious effects, by exhausting the vital energies, the law holds good, as it does in regard to all tonic agents, that its protracted use is not without more or less hazard. Though Prof. Tully states that this is not true of mere and pure tonics, yet our observation leads to a different conclusion. Of course, much will depend on the quantity used. But that any tonic whatever can be given, not only with impunity, but with benefit, for twelve and even twenty years, as stated by this author, is opposed to known physiological laws, as well as established general experience. There may be exceptional cases, as in persons of a strumous habit, who labor habitually under debility of the digestive organs, where the constitution may need and be benefited by the moderate and habitual use of both tonics and stimulants, and especially where the temperament is phlegmatic. Thus the infusion of the *hop* is taken habitually by many in the form of malt liquors, and apparently without injury; this plant tending to diminish the injurious effects of such drinks, not only by counteracting the indirect debility which they might otherwise occasion, but rendering them, when taken in moderation, acceptable to the stomach and promoters of digestion. Nothing, however, can be more hazardous than the constant habit of taking stomachic bitters, such as Stoughton's and other compounds, into which gentian largely enters, to promote a healthy appetite. The

* Mat. Med., vol. II., p. 526.

custom of infusing bitter herbs in vinous drinks,* as remarked by Paris, is very ancient and universal, and the *poculum absinthiatum* appears to have been regarded in remote ages as a wholesome beverage, the wormwood being supposed to act as an antidote to drunkenness. The Swiss peasant, says this writer, cheers himself amid the frigid solitude of his glaciers with a spirit distilled from gentian, the extreme bitterness of which is relished with a glee which is quite unintelligible to a more cultivated taste, and perhaps less acceptable to a stomach accustomed to more nutritive and digestible aliments. Whoever should infer from such instances that bitters are necessary in the ordinary state of health, or that they can habitually be used with safety, would draw a very erroneous conclusion. Granting that bitter extractive is essential to healthy digestion in herbivorous animals, acting as a natural stimulus to their organs, it by no means follows that it is equally necessary for the human subject. It is a well-known fact, and one which has an important bearing upon this subject, that the habitual use of the celebrated Portland powder in cases of gout almost invariably led to a fatal result in the course of two years. This was composed of equal quantities of the powdered roots of gentian, birthwort, germander, ground pine, and lesser centaury.*

* No modern writer has written with more judgment and discrimination on tonics than Dr. Cullen. His theoretical views may not always be in accordance with sound pathology, but his statement of facts is always to be depended on. He remarks that "bitters actually destroy the tone of the stomach. I dare not determine," he continues, "whether the loss of tone mentioned is produced merely by the repetition of their tonic operation or by a narcotic quality which has been suspected in wormwood and other bitters, and which appears pretty strongly from the poisonous quality that is found in the strongest bitter we are acquainted with—that is, the *Faba St. Ignatii*. I am truly of opinion that somewhat deleterious property in the whole of the bitters is to be expected." (*Mat. Med.*, vol. II., p. 64.) Speaking of the Portland powder, in cases of gout, he observes:—"I have had occasion to know, or to be exactly informed, of the fate of nine or ten persons who had taken this medicine for the time prescribed, which is two years. These persons had been liable for some years to have a fit of a regular or very painful inflammatory gout once, at least, and frequently twice, in the course of a year; but after they had taken the medicine for some time they were quite free from any fit of inflammatory gout, and, particularly when they had completed the course prescribed, had never a regular fit, or any inflammation of the extremities to the rest of their lives. In no instance, however, that I have known was the health of these persons tolerably entire. Soon after finishing the course of this medicine they became valetudinary in different shapes, and particularly were very much affected with dyspeptic and what are called nervous complaints, with lowness of spirits. In every one of them, before a year had passed after finishing the course of the powders, some hydropic symptoms appeared, which gradually increasing in the form of an ascites, or hydrothorax, especially the latter, joined with anasarca, in less than two, or at most three, years proved fatal. These accidents, happening to persons of some rank, became very generally known in this country, and has prevented all such experiments since." (See, to the same purport, *Lond. Med. Observer*, I., art. 14; *Chir. Phar.*, p. 341; *Epist. Haller*, vol. v., p. 5; *Gaubius' Works of the Harlem Soc.*, vol. IV., &c.)

Preparations: Fluid and solid extracts, tincture, infusion, wine, and syrup.—The simple and compound fluid extracts are admirable preparations, and preferable to all others, except when the pillular form is desirable for purposes of combination, as with some of the metals. The tincture is readily made by adding four ounces of the fluid extract to one pint of diluted alcohol; also the syrup, by adding two ounces of the fluid extract to fourteen ounces of simple syrup. The solid extract should always be made by displacement with cold water and evaporation, and not by boiling, as heretofore. The U. S. P. directs that the filtered liquor should afterwards be heated, strained, and evaporated to the proper consistence. The compound infusion of gentian has sometimes been known to gelatinize by keeping.

COPTIS TRIFOLIA (*Gold Thread*).

Polyandria—Polyginia—Natural Order—Ranunculaceæ.

This beautiful little evergreen is found growing in sphagnum swamps and boggy woods, in the Northern parts of the United States, also in Iceland and Siberia. The natural order *Ranunculaceæ*, to which it belongs, includes several valuable medicinal plants, of, however, widely diversified properties, as helleborus, delphinium, aconitum, zanthoriza, hydrastis, actaea, cimicifuga, hepatica, &c. Belonging to the polypetalous, exogenous plants, the order embraces herbs, or woody vines, with a colorless, acrid juice. Many of them are powerfully acrid-narcotic poisons, while some, as the coptis and hydrastis, are pure bitter tonics. The coptis is one of the few plants common to both hemispheres. It was named *helleborus trifolius* by Linneus, but afterwards called coptis by Salisbury, from a Greek work signifying *to cut*, from the shape of the leaves. The rhizomata, from which the name of *gold thread* is taken, are perennial, filiform, creeping, of a bright yellow color, running in every direction. The new stems are invested at the base with a number of yellowish, ovate, acuminate scales. The leaves are ternate, on long, slender petioles; the scape slender, round, bearing one small, starry white flower, and a minute bract at some distance below. The genus includes but one species in the United States.

Chemical Composition and Physical Characters.—The organic

constituents of this plant have never been accurately ascertained till your recent elaborate analysis. Bigelow states that the constituent with which it most abounds is a bitter extractive matter, soluble both in water and alcohol; that it seems destitute of resinous or gummy portions, contains no astringent principle, but abounds in bitter extractive matter, which is precipitated by nitrate of silver and acetate of lead. Your analysis gives, of—

Organic Matters,	-	-	-	-	-	-	-	94.17
Inorganic “	-	-	-	-	-	-	-	5.88
								<hr/>
Total,	-	-	-	-	-	-	-	100.00
Gum, -	-	-	-	-	-	-	-	4.07
Albumen,	-	-	-	-	-	-	-	2.90
Starch,	-	-	-	-	-	-	-	1.34
Sugar,	-	-	-	-	-	-	-	5.82
Extractive,	-	-	-	-	-	-	-	3.48
Bitter Principle (yellow),	-	-	-	-	-	-	-	21.00
Oil,	-	-	-	-	-	-	-	6.75
Soluble Salts,	-	-	-	-	-	-	-	3.09
Insoluble Salts,	-	-	-	-	-	-	-	2.94
Lignin, &c.,	-	-	-	-	-	-	-	53.81
								<hr/>
Total,	-	-	-	-	-	-	-	100.00

Therapeutical Properties and Uses.—The gold thread being a pure and powerful bitter, without the least astringency, and more palatable than most of the simple bitters, is well adapted to all cases in which this class of remedies is indicated. Destitute of resin, it imparts its virtues freely to water. It has obtained considerable reputation as a local application in apthous and other ulcerations of the mouth, and also as a gargle in throat affections. The tincture and fluid extract form a very elegant and useful stomachic in atonic forms of dyspepsia, and in convalescence from acute affections where the appetite remains deficient. It has been compared to quassia in its mode of action, but in general it proves more acceptable to the stomach. In bitterness it ranks between gentian and quassia.

Preparations: Substance, infusion, fluid extract, solid extract, tincture, and syrup.—The tincture may be made by macerating an ounce of root in a pint of diluted alcohol, of which one fluid drachm is a dose. The bitter extractive may be precipitated from the infusion or tincture by nitrate of silver or acetate of lead.

MENYANTHES TRIFOLIATA (*Buck Bean*).*Pentandria—Monogynia—Natural Order—Gentianaceæ.*

This perennial plant, like the coptis, is a native both of Europe and North America, growing in swamps and boggy places, and on the margin of ponds. It rarely is met with south of the thirty-eight degree of latitude, or the northern boundary of Virginia. The plant, which is herbaceous, is from eight to twelve inches high, and arises from large, black perennial roots, descending deep into the boggy earth. The leaves, composed of three oval leaflets, are situated on long, round foot-stalks, stipuled at base; leaflets obovate; peduncle long, naked, terminal, bearing a pyramidal raceme of beautiful flesh-colored flowers. It flowers in May; all parts of the plant are medicinal, though the root only is officinal.

ORGANIC CONSTITUENTS.*

Organic Matter,	-	-	-	-	-	-	96.35
Inorganic "	-	-	-	-	-	-	8.65
Total,	-	-	-	-	-	-	100.00
Gum, -	-	-	-	-	-	-	3.328
Albumen, -	-	-	-	-	-	-	9.988
Starch, -	-	-	-	-	-	-	0.089
Extract, -	-	-	-	-	-	-	13.325
Sugar, -	-	-	-	-	-	-	8.806
Coloring Matter, -	-	-	-	-	-	-	17.092
Bitter Principle, -	-	-	-	-	-	-	14.905
Chlorophylle, -	-	-	-	-	-	-	2.400
Resin, -	-	-	-	-	-	-	5.613
Soluble Salts, -	-	-	-	-	-	-	0.889
Insoluble Salts, -	-	-	-	-	-	-	2.701
Lignin, &c., -	-	-	-	-	-	-	20.804
Total, -	-	-	-	-	-	-	100.000

The whole plant has a very bitter and somewhat nauseous taste: its bitterness equaling that of gentian. The bitterness resides in a peculiar bitter principle, to which the name *menyanthin* has been given; soluble in water and spirit. It may be readily obtained by treating the spirituous extract of the plant with hydrated oxide of lead, removing the lead by hydro-sulphuric acid,

* Tilden's analysis.

filtering and evaporating the liquor, exhausting the residue with alcohol, and again evaporating with a gentle heat. It is a neutral substance, having neither acid nor alkaline properties.*

Therapeutical Properties.—As a bitter tonic, the *menyanthes* has long been employed in medicine as a useful tonic, ranking in point of power with gentian and colombo. Although no tannin was detected in it in the analysis above given, yet, as its juice strikes a black color with the persalts of iron, it no doubt contains a small quantity. It is regarded by Cullen, and other writers, as a pure bitter, and Bigelow thinks it entitled to a high place in the list of tonics. Griffith states that in small doses it is tonic and astringent, but in larger doses cathartic and, sometimes, emetic. He regards it as analogous to gentian and centaury in its action, and useful in all cases to which they are applicable. It may be remarked, however, that all the pure bitter tonics are both emetic and cathartic, in large doses, and that there is little difference in this respect among them. These effects are more decided, perhaps, in the fresh than in the dried state. The dried powder of the root may be given in ten-grain doses, with the effect of imparting tone to the stomach and invigorating digestion; in doses of a scruple to a drachm it will often prove cathartic, and in a little larger dose emetic. In Bigelow's experiments, a drachm of the powdered root, or two or three gills of the saturated decoction, produced vomiting and purging, and frequently powerful diaphoresis. In these respects it closely resembles the *eupatorium perfoliatum*. It is more unpleasant to the taste; and this may be the reason why it is not so generally employed for these purposes as the latter plant. Formerly, it was supposed to possess valuable alterative properties, and hence extensively employed in cutaneous diseases, rheumatism, dropsy, scurvy, &c. Boerhaave states that he was cured of the gout by drinking the juice of the plant mixed with whey. As a remedy in intermittent and remittent fevers, it also had considerable reputation, possessing, as it does, sufficient power to break the paroxysms in mild cases. It was also formerly in use in Germany as a prophylactic against disease in general, and was regarded as a panacea.

* According to Tromsdorff, the expressed juice of *menyanthes* contains a very bitter extractive substance, containing nitrogen, a brown gum, some inulin, a green fecula, some malate and acetate of potassa, and seventy-five per cent of water.

It is still used in some parts of Europe as a substitute for hops in brewing, and is even mixed in bread by the Laplanders. Our own experience in the use of this plant satisfies us that it is one of our most valuable simple bitters, very analogous in its effects to gentian, to which it is so closely related in its botanical habit. Its uses are the same as those of the other articles of the same class.

Preparations: Powder, infusion, fluid and solid extract, tincture, and syrup.—The dose of the powder is from ten to twenty grains; the infusion is made with half an ounce of the dried root to a pint of boiling water, the dose of which is an ounce. The dose of the fluid extract is from half a drachm to two drachms; of the solid extract, ten grains—and these may be repeated as usual three times in twenty-four hours. The root is to be gathered in the fall or spring of the year, and carefully dried and kept secluded from the air and light. The same rule is to be observed in regard to all vegetables used as medicines.

Therapeutical Properties of Gelseminum.

BY A. F. PATTEE, M. D., OF WEST AMESBURY, MASS.

THE *Gelseminum Sempervirens*, or yellow jessamine, grows wild in the Southern States. For further particulars of its botanical history the reader is referred to the various works upon botany. This medicine was introduced to the notice of the profession by a Southern planter, who employed it in fevers, he having used it with marked success on his own person and others.

Active Principle of Gelseminum.—The virtues of *Gelseminum* reside chiefly, if not exclusively, in a peculiar organic principle called *gelseminin*, which is said to satisfy all the indications of the plant.

Effects Upon the System.—Numerous articles have been published on the subject of *Gelseminum* within the past three years, throwing much light upon its physiological and therapeutical action. From the results of recent observations and experiments, I am disposed to think that it can well rank as a direct sedative

to the nervous system, and secondarily to the circulation, while it occasionally acts as a diaphoretic and diuretic. Applied to the skin, it first occasions a slight feeling of heat, which is soon followed by a little numbness; when taken into the mouth, in a concentrated form, it often occasions dryness of the mouth and fauces; when applied to the eye it causes dilatation of the pupil, an effect which I have witnessed upon myself and others. Given internally, in small doses, repeated two or three times daily, so as to bring the system gradually under its influence, the first effect usually noticed is an agreeable and diffusive feeling of comfort, followed, perhaps, by slight vertigo, or other uneasy sensations in the head, and a slight reduction of the pulse. From larger quantities the effects are more quickly induced, and are more severe. If more frequently repeated, giddiness, dimness of vision, dilated pupil, general muscular weakness, and a feeling of inability to move or speak, takes place, with syncope in many cases. The pulse is reduced fifteen or twenty strokes per minute, and the respiration accordingly, with a general condition of muscular and nervous prostration, which may continue for hours or even days. This condition, however, soon passes off by giving from one to five grains of quinine with a teaspoonful of wine, every three hours, or from ten to twenty drops tincture of opii every four hours, leaving the patient in a gentle perspiration, with a feeling of comfort and ease.

A peculiarity in the operation of Gelseminum is, that while it diminishes both general and special sensibility, consciousness is usually in no degree impaired. No nausea or vomiting is ever occasioned by the medicine. As to narcotic properties, which have been ascribed to it by many, I have not been able to distinguish any effect upon the system that would lead me to conclude that it had any peculiar action but what could be attributed to its other properties. Carbonate of ammonia, opium, quinine, iodine and brandy, are antidotes for an overdose, which may be given as occasion may require.

Therapeutic Application.—The general indications to which Gelseminum is suited, through its sedative properties, to fulfill, is to reduce morbid excitement of the nervous and circulatory systems. Hence it will be found useful as an anodyne, antispasmodic and antiphlogistic remedy. In all cases of acute inflammation, espe-

cially when attended with fever, Gelseminum may be advantageously used; but it is in *fevers* and *pectoral affections* in which it has enjoyed the most reputation. In all the *idiopathic fevers*, with a sthenic or asthenic state of the system, Gelseminum is very useful, by diminishing the febrile symptoms, promoting secretions, especially of the skin, and quieting nervous excitement.

Dr. Nash says:—"I have used the article in every case of idiopathic fever that has fallen under my treatment within the last six months, with perfect impunity, and with the most desirable results: age and sex not affecting its exhibition."—*Jour. of Mat. Med.*, April and May, 1858.

As regards the effect of Gelseminum in this class of diseases, it would seem, from the promptness of its action, to have a direct effect upon the morbid condition of the system, or cause that produces the disease.

Typhoid or enteric fever is a disease in which Gelseminum exhibits, probably, its most extraordinary powers; and if medical reports can be relied upon, it would seem that the disease was easily managed by the new remedy. But I have met with cases, now and then, which resisted its influence, and doubt not others have; therefore, we cannot look upon it as a specific in this disease, or a remedy superior to *veratrum viride*, in all cases.

Dr. Nash writes:—"I have, in two instances, succeeded in relieving patients within twenty-four hours, whose cases presented all the primary symptoms of veritable *typhoid fever*."

Dr. Miller writes:—"I am perfectly satisfied that Gelseminum will cut short typhoid fever, when given early in the disease." Very soon after the system has come under the full influence of the remedy the pain in the head abates, sleeplessness is relieved, and the pulse reduced in frequency and force; inflammation of the internal organs is stayed, and the patient, in most instances, enters into convalescence in from six to ten days from the commencement of treatment.

Yellow Fever.—Gelseminum has been employed at the South in this disease, instead of quinine, to suppress the fever by its sedative influence. Among those who report most strongly in its favor are Drs. White and Ford, of Charleston, South Carolina, who found it very effectual in cases characterized by great irritability of the stomach. The total number of

cases treated by them with Gelseminum was twenty-four. Of the whole number treated, two vomited black vomit, five passed black vomit downwards; in three cases hemorrhage occurred from the tongue, gums, or nasal passages. One woman was in the sixth month of her pregnancy, and did not abort. No marked prostration was caused by this remedy.

In diseases of the heart and arteries, this remedy may be used with advantage; in *hypertrophy* of the heart, without valvular disease, the result of irritation, it is an admirable remedy; also in functional palpitation of the heart, dependent upon plethoric, anæmic, or nervous disorder.

It has been recommended in *inflammation of the brain, angine bronchitis*, pneumonia, and the inflammatory conditions of scrofula and phthisis. Hæmoptysis also offers an indication for the use of this remedy, which may be given to reduce the action of the heart when there is active arterial excitement.

I have used the remedy in *convulsions* and tetanic spasms, and in some instances these diseases have been averted by its timely use. *Headache* of the nervous kind may often be relieved, and I have found no one medicine so useful in this troublesome disease. *Neuralgia*, in its various forms, may be treated with this remedy, both internally and externally, with the hope of benefit. In *coryza, or cold in the head*, this is one of the best remedies I have ever used; it cures the severest cases in from twelve to forty-eight hours. It is said to be useful in *intermittent fever*, especially when combined with quinine, or followed with quinine after the pulse is reduced.

Preparations: Powder, infusion, decoction, fluid extract, tincture and gelseminin.—The fluid extract is a standard preparation, and from it most of the other preparations can be made—the *tincture*, by adding ℥ iv. of the fluid extract to a pint of diluted alcohol, or by taking ℥ iv. of rad. gelsem. semp. to one pint of diluted alcohol. M., and digest fourteen days, then filter. The dose of the fluid extract is from two to twenty drops; tincture, from twenty to sixty drops; gelseminin, half to two grains, repeated once in three or four hours, till some observable effect is produced upon the pulse, or until it is reduced to sixty-five or seventy beats per minute.

I was informed by a physician of Concord, N. H., that a con-

vict in the State Prison swallowed one and a half ounces of the fluid extract, with intent to poison himself. The effect was great prostration, nausea and vomiting, dilated pupils, inability to speak or move, coldness of the surface, &c. The effects passed off, with proper antidotes, in about twenty-four hours.

Iron and Its Preparations.

[CONTINUED.]

TARTRATE OF POTASSA AND IRON.—Dose, gr. x. to 3 ss. Given in solution, or combined with an aromatic or bitter, in the form of bolus. It is one of the soluble salts of Iron. From its slight taste and ready solubility, it is one of the best ferruginous preparations for children. It combines the tonic properties of the Iron with the mild cooling purgative action of the neutral salt. In cases of plethoric amenorrhœa it serves its specific purpose in supplying the requisite hæmotosin, at the same time keeping up the necessary laxative action. Thus it is useful in chlorosis and anæmia with constipation.

R.—Tartrate of Potassa and Iron, - - - ʒ iii.
Distilled Water, - - - ʒ xvi.

Dissolve and filter. A tablespoonful to be taken, pure, or mixed with some tisane. Used in chlorosis, anæmia, chloro-anæmia, and phagedenic syphilitic ulcers.

R.—Tartrate of Potassa, - - - 3 ss.
Distilled Water, - - - ʒ ii.
Cinnamon Water, - - - ʒ ii.
Syrup of Tolu, - - - ʒ ss. M.

From one to four tablespoonsful to be taken daily, in the same cases as the last.

R.—Tartrate of Potassa and Iron, - - - 3 iiss.
Syrup of Tolu, - - - ʒ xvi.
Cold Water, - - - q. s.

Dissolve the salt in the water, and add the solution to the syrup. From two to six spoonsful to be taken daily, in chlorosis, anæmia, &c.

R.—Simple Syrup, - - - ʒ xvi.
Tartrate of Potassa and Iron,
Iodide of Potassium, - - - aa. 3 iiss.
Cinnamon Water, - - - ʒ iii.
Water, - - - ʒ ii.

Dissolve the salt in the filtered water, add the syrup, and shake them together. From two to six tablespoonsful to be taken daily. Used in scrofulous affections accompanied by chlorosis.

℞.—Tartrate of Potassa and Iron, - - - - - $\frac{3}{4}$ ss.
 Extract of Cinchona, - - - - - 3 iiss.
 Excipient, - - - - - q. s.

Mix, and divide into 100 pills. From one to fifteen to be taken daily. Used in the treatment of phagedenic syphilitic ulcers, and in most cases where the use of Iron is indicated.

℞.—Tartrate of Potassa and Iron, - - - - - $\frac{3}{4}$ ss.
 Extract of Rhatany, - - - - - grs. lxxv.
 Excipient, - - - - - q. s.

Mix, and divide into 100 pills. From one to ten to be taken daily. Used in chlorosis accompanied by menorrhagia, and in anæmia from hemorrhage.

FERRUM AMMONIATUM.—Dose, four to twelve grains, in the form of pill, electuary, or solution, several times a day. Formerly used under the names of *flores martiales* and *ens martis*. It unites aperient properties with those belonging to the chalybeates generally, and is said to have been used with advantage in amenorrhœa, epilepsy, scrofula, rickets, &c.

Tinctura Ferri Ammonio-Chloridi.—This is simply a solution of the above in diluted alcohol.

VINUM FERRI.—Dose, one to two tablespoonsful, given several times a day. It is a feeble chalybeate, though applicable to many cases requiring the use of Iron, and in which the stimulant effect of the wine may be useful, or at least is not contra-indicated. A good substitute may be made by dissolving an ounce of tartrate of Iron and potassa in twelve fluid ounces of water, previously mixed with an equal measure of sherry wine.

LACTATE OF IRON.—Dose, one to two grains, repeated at moderate intervals. Obtained from the action of lactic acid on Iron filings. Its combination with an animal acid renders it easily assimilated. It is well borne by the stomach, and always sensibly increases the appetite. It has been used in well-marked cases of chlorosis, and with eminent success. It acts equally well whether the chlorosis be accompanied by amenorrhœa or not. Dr. Brainard, of Chicago, has treated, with success, a large erectile tumor of the orbit, by infiltrating it by injection with a fluid drachm of a solution of lactate of Iron, containing eight grains of the salt. *Chalybeate bread* has been administered in one of

the largest hospitals of Paris to chlorotic patients, and with the best effects. From four to five grains of lactate of Iron may be mixed with every three-and-a-half ounces of bread, without giving it any unpleasant taste or injuring its quality. Iron by hydrogen, and also hydrate of (oxide of) iron, are often beneficially given to children, in the form of lozenges, chocolate, biscuits, &c.

R.—Lactate of Iron,	- - - - -	3j.
Powdered Liquorice,	- - - - -	3j.
Honey,	- - - - -	q. s.

Mix, and divide into forty pills. From one to six to be taken daily.

R.—Ferri Lactat.,	- - - - -	3 vii. grs. 43.
Sacchar.,	- - - - -	℥ xiss.
Mucilag. Acaciæ,	- - - - -	q. s.

Make into lozenges, each weighing ten grains, which will contain three-quarters of a grain of the salt.

R.—Lactate of Iron,	- - - - -	3j.
Boiling Distilled Water,	- - - - -	℥ viiss.
White Sugar,	- - - - -	℥ xiii.

This syrup is more convenient than the lozenges, because the ferruginous taste does not remain so long in the mouth.

R.—Lactate of Iron,	- - - - -	
Powdered Althea,	- - - - -	aa. grs. xvss.
Honey,	- - - - -	q. s.

Make twenty pills.

DENTRIFICE POWDER,

(To prevent the teeth being blackened by the preparations of Iron.)

R.—Powdered Cinchona,		
Tannin,		
Vegetable Charcoal,	- - - - -	aa. 3 iiss.
Porphyryze with care, and add		
Essence of Cloves,	- - - - -	5 drops.

A soft brush to be moistened and dipped into powder, the teeth rubbed with it, and the mouth thoroughly cleansed with water.

FERRI CITRAS.—Dose, three to five grains. A combination of Iron with a vegetable acid. An excellent tonic, with quinine, in intermittents, and in old chronic intermittents where the indication is to restore strength. The citrates are not decomposed by alkalis, and may be given with them, if desirable. This is one of the most agreeable of the chalybeates, and perhaps equally effective with any. It resembles the tartrate and lactate of Iron, and may be given in the same cases.

R.—Citrate of Iron, - - - - - ʒj. (Troy).
Simple Syrup, - - - - - ʒv.

Dose, thirty drops to one teaspoonful.

The syrup of the citrate of Iron of Beral is a saccharine solution of the citrates of ammonia and sesquioxide of Iron.

FERRI AMMONIO-CITRAS.—Dose, five grains, several times a day; conveniently administered in porter, which conceals its taste. Its ready solubility gives it an advantage over the citrate.

R.—Take of *Iron filings*, four ounces; *bitter oranges*, four ounces. Remove the peel, the white, and the seeds; beat them in a stone mortar, and let the paste remain at rest for two days; then pour upon it *Madeira wine*, ten ounces, and *spirit of orange peel*, two ounces.

According to Mr. Gore, it possesses the most agreeable odor and taste of any medicinal compound ever introduced into practice. It is aromatic, carminative and tonic; and he adds, that he has no doubt it will supersede the preparations in general use, when once it has been fairly tried. In strumous habits, in passive uterine hemorrhage, in anasarca from general debility, in chlorosis, in malignant disease (in which Iron has been extolled), and in all diseases that arise from a deficiency of tone, Mr. Gore considers this preparation to be "of exceeding utility, from its agreeable and chalybeate qualities." He suggests also its use in chronic bronchitis, in which he gives it with ipecacuanha wine.

FERRI ET MAGNESIÆ CITRAS.—Dose, four to fifteen grains, in solution, powder, or pill. This salt is perfectly soluble in water, and has the advantage over the ferro-citrate of ammonia, that it is not deliquescent, so that it can be given in powder. Moreover, it does not induce constipation, like most of the salts of Iron.

R.—Ferri et Magnes. Citrat., - - - - - p. x.
Dissolve in
Aq. Flor. Aurant, - - - - - p. xx.
Syrup, - - - - - p. cc. M.

FERRI ET QUINIÆ CITRAS.—Citrate of Iron and quinia may be given in the form of pill, whenever a combination of these tonics is needed. An extemporaneous formula may be made by uniting citrate of Iron and citrate (or even sulphate) of quinia together, which may be given either in pills or solution.

FERRI TANNAS.—Dose, ten grains to half a drachm in the day, given in syrup or in pillular form. Has been highly extolled in chlorosis, and wherever astringent chalybeates are indicated. *Ink*, which is an aqueous solution of the tanno-gallate of Iron, has long been a popular and efficacious application to *herpes circinnatus*, or ring-worm.

R.—Syrup, - - - - -	℥ xii.	
“ Aceti, - - - - -	℥ iv.	
Ferri Oxidi Magnetici Citrat., - - -	3 iiss.	
Ext. Gallæ., - - - - -	3j.	M.
R.—Sulphate of Proto-Oxide of Iron (green sulph.),	3 iiss.	
Tannin, - - - - -	3 ss.	
Water, - - - - -	℥ ii.	

Used for touching phagedenic syphilitic ulcers, two or three times a day.

From Parish's Practical Pharmacy.

The Cinchona Alkaloids and Their Salts.

QUINIDIA.

[CONCLUDED.]

Quinoidine is sold at a still lower price than either of the crystallized products. I am told that the demand for it has not justified manufacturers in preparing all that is produced for sale.

Detection of Adulterations and Impurities in Sulphate of Quinia.—The behavior of the cinchona alkaloids and their salts has been mentioned under their respective heads, and, with the aid of these tests, it is not very difficult to distinguish the alkaloids, when pure, from each other. There is more difficulty experienced in detecting the presence of one alkaloid in another, or in finding out foreign substances sometimes fraudulently mixed with them. The following are the various tests proposed for these purposes:—

1. *Zimmer's Test.*—Sixty drops of ether, twenty of aqua ammonia, and ten grains of the sulphate, previously dissolved in fifteen drops of water and ten drops of dilute sulphuric acid, made of one part, by weight, of sulphuric acid, to five of water, are mixed in a test tube; the quinia, being soluble in ether, will not appear, but any admixture of cinchonina, or above ten per cent of quinidia, will separate as a layer of white powder, between the aqueous liquid and the supernatant ether. If quinidia be present, it will be dissolved by a large addition of ether, while cinchonina will not. If less than ten per cent of quinidia is present, the mixture will be clear, but the quinidia will soon crystallize, while quinia will, after a while, gelatinize the ethereal solution.

2. *Rump's test* is said to be even more delicate than the former. Six grains of the sulphate, one-half drachm of ether, two or three drops of aqua ammonia, are well agitated in a test tube; pure sulphate of quinia will yield a perfectly transparent solution; if five per cent of sulphate of quinidia is present, the solution will likewise be clear, but after a while will become turbid; ten per cent of quinidia will leave a portion undissolved; with less than five per cent, the solution is to be evaporated spontaneously, quinidia will then be left in crystals, but quinia as a gummy mass.

3. *Liebig's Test*.—Fifteen grains of the salt are rubbed with two ounces of aqua ammonia, this is heated until nearly all odor of ammonia has disappeared, and agitated with two ounces of ether. If a turbidness remains on the margin of the two liquids, cinchonia is present.

The ethereal solution may, besides quinia, also contain quinidia, which, like the above, will be left in crystals on spontaneous evaporation.

4. The presence in the sulphates of cinchona alkaloids of common adulterations may be detected as follows:—

The sulphates are entirely soluble in cold dilute sulphuric acid, and entirely dissipated by heat. *Sulphate of lime* may be detected by its insolubility in alcohol, and by remaining, after ignition, on a piece of platina foil. *Starch* would remain insoluble in dilute acid and in alcohol, and would be recognized by the well-known iodine test. *Stearic* and *margaric acid* and *resins* would float in the acid solution, and be dissolved by ether. *Salicine*, if more than ten per cent were present, would show, with concentrated sulphuric acid, a red color. *Phloridzin* would be detected as yielding a yellow color with the same reagent, or by the yellow, red and blue color imparted to it by gaseous ammonia under a bell glass. *Sugar* or *mannite* would be blackened by concentrated sulphuric acid. *Oxalate of ammonia* would be detected by giving off ammoniacal vapors, with caustic potassa. Solution of caustic baryta dissolves *salicine*, *phloridzin*, *gum*, *mannite*, &c., but leaves the alkaloids and sulphate of baryta; in the solution, after it has been freed from baryta by carbonic acid, these substances may be detected.

Besides the above, the following alkaloids have been discovered in various barks:—

• *Aricina*, derived from *Arica*, the port from whence the bark is sent, is prepared like the other cinchona alkaloids, and crystallizes in white, transparent needles, which gradually develop a bitter, warming, sharp taste, melt between 856° and 874° , are insoluble in water, soluble in ether, alcohol and ammonia. It is colored green by concentrated nitric acid.

The salts are crystallizable, bitter, easily soluble in water and alcohol, insoluble in ether.

Paricina has been discovered in *Para* bark, by Winckler.

It is a white mass, uncrystallizable, electric when rubbed to powder, little soluble in water, easily soluble in ether and alcohol, and is left, after evaporation, as a golden-yellow, resinous mass. Its salts are amorphous, resinous. It appears to bear to *aricina* the same relation as *chinoidina* to quinia.

Pitaya, discovered by Peretti, is prepared from the aqueous extract, which is exhausted by alcohol, evaporated, dissolved in water, and precipitated by ammonia, washed with ether, and crystallized from boiling water.

It is in colorless prisms, volatile, not bitter. Its salts are bitter and crystallizable.

Carthagia, discovered by Gruner, in Carthagena bark, crystallizes in needles, is tasteless, insoluble in water, soluble in alcohol.

Its salts are bitter, crystallizable, resembling the quinia salts, but are said to be destitute of febrifuge qualities.

EMETIA.

Emetia is the active principle of ipecachuana, and is also present in the roots of several species of viola.

The root is extracted by acidulated water, and precipitated by ammonia; to obtain it pure and white, according to Merck, it is dissolved in dilute muriatic acid, precipitated by corrosive sublimate, dissolved in alcohol, decomposed by sulphuret of barium to precipitate mercury, and sulphuric acid to precipitate baryta, diluted with water, the alcohol evaporated, and the sulphate of emetia precipitated by ammonia.

It is a white, inodorous powder, not crystalline, of a bitter taste, soluble in alcohol, sparingly so in water, nearly insoluble in ether and fixed oils, fusible at about 120° Fah. Its native salt existing in the root is taken up by water, wine and diluted alcohol. It assumes a dirty green color by sulphuric acid, is converted first into a yellow, bitter, resinous substance, afterwards into oxalic acid. In minute doses it acts as a powerful emetic; in larger doses it is poisonous. Nearly all its salts are easily soluble in water; the acid salts, according to Liebig, are crystallizable. The commercial *emetia* is very impure, and not preferable for ordinary use to the various Galenical preparations of ipecac, in which the peculiar astringent and acid principles are associated with the alkaloid.

The *emetinum impurum* of some Pharmacopœias, which in the French *emetin colorée*, is obtained by exhausting the alcoholic extract of ipecacuanha with water, neutralizing with carbonate of magnesia, and evaporating the filtrate.

Arnicina is prepared by exhausting the flowers with alcohol mixed with some sulphuric acid, treating the tincture with lime and the filtrate with sulphuric acid, an excess of carbonate of potassa and ether, which dissolves it.

It is solid, slightly bitter, not acrid; its odor resembles that of castor; it is slightly soluble in water; more in alcohol and ether. It is little known.

BLEEDING PILES.—One of the simplest and surest means for temporarily checking this kind of hemorrhage is the application of perchloride of iron dissolved in glycerine, and applied on a piece of lint.—*Braith. Retropect.*

From the *New Medical and Surgical Journal*, of January, 1880.

Diphtheria.

By S. L. BIGELOW, M. D., of Paris.

(Communicated in a Letter to Prof. Warren Stone, M. D., of the University of Louisiana.)

[We give below the concluding portion of the interesting letter on diphtheria from Dr. S. L. Bigelow, of Paris, to Prof. Warren Stone, M. D., of the University of Louisiana, want of space not permitting us to publish it entire in our last number.—EDS. *JOUR. MAT. MED.*]

In addition to the above, I commence immediately with the use of tonics, stimulants, and the most nourishing possible fluid animal food. Quinine every three hours, in as large doses as can be borne without producing severe cerebral perturbation; bitters composed of cinchona, colombo, camomile, quassia, bitter orange peel, &c., formed into a strong infusion, to which I add brandy and a little syrup. The following is my ordinary formula:—

R.—Cort. cinchona flav. cont.,.....	$\frac{3}{4}$ ij.
Rad. gentian, cont.,.....	$\frac{3}{4}$ ij.
Rad. colombo, cont.,.....	$\frac{3}{4}$ ss.
Cort. aurant, flor. anthemis, quassia amara,.....	aa. 3 ij.
Aq. bulliens,.....	Oij.
M. Ft. infus. et add spts. vini gallic,.....	$\frac{3}{4}$ vj.
Syr. cort. aurant,.....	$\frac{3}{4}$ iv.

Of this I give ordinarily to an adult from half to two-thirds of an ounce five or six times in twenty-four hours. Strong *bouillon* of beef, mutton and chicken, cooked together until it forms a jelly on cooling, from which may be made tapioca or vermicelli soup as a change, a teacupful every three or four hours, with occasionally a soft-boiled egg instead. Ale, porter, sherry, brandy and water, from time to time, in such quantities as may be borne. Of course, no fixed laws can be given for the administration of these things, but the sagacity of the physician is always with him to act as his mentor and guide. If the necessity occurs, I administer from time to time a purge of the citrate of magnesia, *always* in divided doses, repeated at intervals, if necessary, in order not to produce mischief by an intemperative dose. I always repeat, every two or three days, my tepid bath, of an hour. The patient ought always to be visited from three to six times daily, and the first visit should be always very early and the last one very late. The topical applications should be made as frequently as possible by the physician himself, as his experience and knowledge enables him to perform them with much greater effect than the nurse or member of the family can attain. The insufflations are to be continued day and night so long as a tendency to the formation of the false membrane continues; and I am in the habit of alternating between the powdered alum and tannin at each hour—more to take the benefit of the chances than because I am convinced that I obtain better results. I find that

under the above course of treatment, promptly applied and vigorously continued, the larynx is, in the majority of cases, spared from the membranous exudation, but still it too frequently becomes invaded in spite of all we can do to permit me to pass over the terrible accident in silence. And now comes a solemn moment for solemn remarks. Many authors of high merit have counselled, and still advise, the use of emetic in high doses, to produce the expulsion of the false membrane from the larynx or trachea. I have never yet prescribed a single grain of emetic in a case of angine couenneuse, and I hope that it may never be given me so to do. I protest, in the most serious manner, against this advice, which may, no doubt, be good at times in membranous croup, for at all hazards, and at all costs, we must maintain the integrity of the stomach and sustain the forces of the patient, not only for the duration of the disease, but for the convalescence, fearful at best. The presence of the spoon in the throat gives rise to efforts of coughing, sufficiently powerful to answer all the ends of an emetic in the expulsion of the membranes, and it deteriorates in no wise the integrity of the action of the stomach; and let the stomach fail, and I will give up all as lost. There are those in authority who counsel blood-letting, under conditions of pulse in this disease. I would as soon put my lancet into the vein of a moribund typhique as to take an ounce of blood from a patient with membranous sore-throat, under any circumstances of the disease which I have ever witnessed or can imagine. Your baths, which are in no wise debilitating, and your intestinal evacuations by means of gentle aperients, are sufficiently sharp-pointed lancets.

One word more and I am done, my dear doctor and master, with what I have to offer in regard to the treatment of this formidable and fearful disease. We have arrived now at the most terrible episode of the disease we can encounter—imminence of death by suffocation from the accumulation of plastic lymph in the larynx. The only aim then left is to still prolong the life of the patient, and then the chances of aid from general treatment—the only means is *tracheotomy*; and I know that the word will pale on your ear. I know that you have said, and under circumstances of the most appalling nature, that you would never open another trachea in a case of croup. I know, too, that you have since been guided by the high star of your intelligence to do it more than once. Do it, dear doctor, and *always* do it, but do not do it too late. It is impossible to perceive the moment away from the bedside of the patient, but to the sagacious physician shall it be given *to do*, when the time comes. I think that Dr. Gay, of Boston, has *said* the best and *done* the best of any living man, not even excepting Trousseau, in regard to the question of the proper time to operate and the proper treatment to pursue after performing tracheotomy in membranous croup—he operates early. And let me assure you that my profound belief is that you must operate even *earlier* in a case of angine couenneuse than in a case of croup—for you doom your patient to a certain death if you allow his vital powers, his powers of assimilation, to arrive at an ebb when ingestion becomes null before you operate. Operate

while he can still assimilate—it is *not* as Malgaigne would have it, in his arbitrary contempt for *medical* surgery, an operation a thousand times fraught with peril in itself; it is simply a flea bite in comparison with the sure results of a tardy operation.

And now I advise what I have never seen advised or know to be put into practice, except by myself, after the operation—not only to continue the insufflations of alum into the pharynx, but to practise them immediately, constantly, and vigorously into the trachea through the tube inserted in the ordinary manner into the trachea, and to perform them also with the same vigor and as well as you can into the larynx, by turning the tracheal tube in the opposite sense and blowing it the most effectively possible upward into the larynx. I need hardly add that the same general treatment is to be continued constantly the same as before the operation, which only constitutes an episode.

I find that the “few words” which were to form my letter to you have pre-created already to an alarming extent, and as yet I have not said one word in regard to the convalescence from the disease and the accidents which the most frequently accompany it as sad satellites. I promised early in my letter also to speak specially upon the sequent progressive paralysis. If you will still bear with me, I will continue this hasty and wholly unpremeditated document. Convalescence arrives, and we naturally add to our already nourishing fluid diet, solids, such as beef-steaks *underdone*, roast beef *underdone*, mutton chops, poultry, game, vegetables, &c. I forgot, in my hurried ramble, to say, that throughout the whole course of the disease I gave an abundance of such fruits as peaches, grapes, apricots, cherries, currants, raspberries and strawberries, each or all in season, with lemonade and morsels of ice as a beverage, also soda water and syrup of raspberries, currants and gooseberries, as beverage. All this may be continued during the convalescence, accidents to be met as the discretion and judgment of the physician may dictate.

I forgot also to state that I prefer my patient in angine couenneuse to change his chamber daily, or more frequently even, as in typhoid fever, and to have free and constant access to fresh air from without.

It is generally two or three weeks after the disappearance of all traces of false membranes from the pharynx that the symptoms of paralysis commence. The muscles of the soft palate are the first to indicate the invasion of this new series of accidents—it is indicated by the nasal sound of the voice, and by the regurgitation by the nose in the act of swallowing of liquids taken in by the mouth. During this period of convalescence, patients, instead of gaining strength, activity and flesh, lose in each particular respect. Pains in the back and joints supervene, numbness and prickly sensations in the feet and legs manifest themselves, insensibility and partial or complete loss of the power of locomotion. The *feces* and urine are evacuated involuntarily, the tongue trembles, and articulation becomes imperfect, and sometimes impossible. The appetite generally remains good, the intelligence is preserved, but there is a tendency to indolence. The parts paralyzed become less sensible to the touch, or in some cases entirely senseless to tactile excitation, but the

electric sensibility is never destroyed. The superior members are also subjected to the same paralytic phenomena as the inferior, and paraplegia even sometimes occurs in a marked degree. The muscles of the face and eyes even become involved also, in their turn, in certain cases. There is evidently no coincidence in this condition of paralytic phenomena with the disease in question, as all known observations show that the accidents commence in the same manner and arrive at the same or similar results. The ordinary termination of the paralytic accidents is recovery. For their cure, iron tonics, generous diet, cold effusions, warm clothing, and exercise in the open air are the best. Strychnine, nux vomica, and electricity have seemed to me to exert no favorable influence in their cure; on the contrary, sometimes the patient dies under this state of things, but no pathological phenomena are left to indicate the material lesion or cause of death. Diphtheritic paralysis is probably the effect of the toxic poison of the disease—but nobody knows. All that we can say at present is, that it is a disease which leaves no palpable traces in the nervous centres, that it is certainly caused by diphtheria, and that we cannot trace the cause to the effect.

I have said all I have to say for the moment, dear doctor; and I trust in you to excuse my apparent or real egotism in giving you only my own personal views upon a subject which is deeply agitating the entire medical world. You asked it of me, and I have *literally* given what you asked. Let me hear from you again soon; and believe me,

Yours truly,

S. L. BIGELOW.

Case of *Tænia*.

By D. N. FERGUSON, M. D., of Carthage, Jefferson Co., N. Y.

Miss Z., aged 29 years, German, applied to me on the 21st of September last, to be treated for tape-worm, from which she had long suffered. On investigating her case, I found that her general health, which had been previously good, was now somewhat impaired. I learned on further investigation that she had frequently passed pieces of tape-worm, and at one time a piece seven feet in length. I commenced the treatment of the case by the use of meal gruel, sparingly administered during the day, September 21st. On the following morning ordered the following cathartic:—

R.—Pulv. jalapæ, ext. colocynthidis,aa. gr. vi.
Podophyllin, gr. iv.

Mix, and make into nine pills, three to be given every four hours, and free catharsis procured. Before retiring the patient was allowed to partake of meal gruel.

23d, at 9 o'clock A. M., administered oleum terebinthinæ, fʒ i. At 12 M., ordered oleum ricini, fʒ iss.; and at 4 P. M. a tape-worm 25 feet in length was expelled, and of that variety denominated *tænia lata*.—*Phil. Med. & Sur. Jour.*

From the Southern Medical and Surgical Journal, September, 1859.

Veratrum Viride in Chorea.

By DR. PAUL DE LACY BAKER, of Eufaula, Alabama.

Dr. Baker's experience is confined to one case of chorea, but he corroborates it by three similar cases, furnished to him by a friend—Dr. Terry, of Eufaula, Alabama. Dr. Baker also suggests a trial of the drug in tetanus and hydrophobia.

1. *Dr. Baker's Case.*—On the 17th of June, 1858, I was called to a young lady suffering from a violent attack of chorea. The mother informed me that it had been very gradually coming on, for a month or two; her symptoms, when first visited, were distressing to the last degree; her entire muscular system was in continuous and tumultuous commotion, so much so, that it was with difficulty that she could be kept upon the bed. This case passed on from bad to worse, notwithstanding the most assiduous attention and energetic treatment; tonics, antispasmodics and anodynes were exhausted without avail. The spine and nucha were cupped and blistered without benefit, chloroform was administered both internally and by exhalation—in fact, every remedy that could be legitimately suggested was resorted to, but without success; and it seemed at last that the girl must die from exhaustion and want of sleep. Opium, and its various preparations, appeared to make her worse; once or twice I suggested the employment of veratrum viride, but it was postponed until the 18th of the month, when my partner, Dr. Thornton, under whose especial care the case had been, was called off to Georgia. On that day, just as I was starting to visit her, my friend Dr. Terry, hearing of the unusual violence and obstinacy of the case, stopped me and proposed that I would give veratrum viride a trial, assuring me that he had thrice used it in chorea with the most satisfactory results. So, I concluded, both from my own experience and from his positive statement, to withdraw all other medication and give the veratrum viride a full and fair trial. The family had given up all expectation of her recovery. I told them, however, on my arrival, that I had come with a new remedy, the last and only one that had not been tested, and that I felt convinced the girl would recover under its use. I at once commenced its administration, and as she was gradually brought under its influence the turmoil began to cease; the face, which had been worked by its muscles into the most ludicrous and horrible distortion, became placid and intelligent, the head had ceased its everlasting jerking, the extremities lay still, the body left off writhing, and the patient quietly passed into a peaceful and profound slumber. This sleep was deep and long, as it was the first, with few and slight exceptions, that she had had in nearly two weeks, and the quiet that the muscles now received was all that had occurred save during those few and short slumbers. At a subsequent visit I found the family cheerful and hopeful, and the patient quiet and sleeping, the pulse but little depressed; there had occurred no vomiting. I roused her, and, to my great

satisfaction, when awake, there was no jactitation of the extremities, and but very little twitching of the muscles of the face.

In this case I thoroughly tested the influence and power of *veratrum viride*, for the first few days; if its administration was withheld the commotion began gradually to return, but all would again become quiet upon resuming its employment. At first, so continually did she sleep under the quiet that it induced, that the family called the *veratrum* preparation "the laudanum mixture," notwithstanding they were aware that she had taken large quantities of morphine, without benefit, in our efforts to induce sleep. The *veratrum* was continued for several days, the convulsive movements ceased altogether, the muscles became completely obedient to the will, and the lady returned to perfect health and blooming beauty, under a judicious and properly regulated tonic course of treatment.

2. *Dr. Terry's cases:*

CASE 1.—I was called in Randolph County, Georgia, to visit a child aged twelve years. It had been confined to bed for three weeks, and was reported to have been under treatment for about six weeks; first for worms, with calomel, spigelia, wormseed, &c., and subsequently for chorea (with which I found it suffering), with *cimicifuga*, iron, quinine, and the usual routine treatment, until the child was apparently dying.

It is not in the power of language to convey a proper conception of the truly pitiable state in which I found this child; no description can afford any adequate idea of its appearance and condition. It had slept none, neither had it taken any nourishment for days; it was evidently dying from exhaustion and inanition, the muscular commotion was violent, universal, and unaffected by sleep; the lips embossed with foam, worked up by a continual champing of the teeth. I instituted the following treatment:—Three drops of *veratrum viride* were administered every three hours, the vehicle for each dose being a teaspoonful of gum water, a small portion of which was introduced into the mouth every few minutes, until the whole was given, the medicine being in this way rather *absorbed* from the mouth, probably, than swallowed. In twenty-four hours I had the gratification to see the symptoms greatly improved. The muscles were much quieter, and the child could swallow without difficulty (the trouble in this respect had constituted the greatest embarrassment in the treatment). I continued the *veratrum viride* in connection with iron and quinine. At the end of the fourth day all convulsive action had ceased; the *veratrum viride* was still further continued, though in smaller doses, and at long intervals. Quinine, iron, and generous diet completed the cure promptly.

CASE 2.—Girl, *æt.* fifteen. This was an ordinary case. She was purged freely, after which four drops of *veratrum viride* were administered every three hours. Under its use the convulsive phenomena soon disappeared, after which the *veratrum viride* was continued for a few days at long intervals. This case also promptly convalesced under the use of iron, quinine and generous diet.

CASE 3.—Woman, æt. thirty-six; had borne no children; was subject to menorrhagia; immediately after an attack of which she was taken with chorea, marked by continued nodding of the head and violent convulsive action in one arm, together with slight jactitation of one leg. In this case I directed six drops of veratrum viride every three hours; the fourth dose occasioned slight nausea, and after the fifth dose the convulsive action ceased, when the veratrum viride was withheld. There followed, in the course of eight or ten hours, a return of the symptoms; the medicine was again resorted to, with the former quieting result. The doses were then reduced, but continued for several days, at long intervals. This case, like others, recovered under the use of quinine, iron and generous diet.

Use of White Paint in Some Cutaneous Maladies.

By Mr. ALFRED FREER.

"I first became acquainted," says Mr. Freer, "with the great efficacy of white paint in the treatment of erysipelas by seeing it used by my late father and by my brother. It is, indeed, in this disease that the most striking benefit results from its application. I have never yet met with a case of this nature where it has not done immense good. I find it far superior to lead lotions, mucilage, hot fomentations, nitrate of silver, or collodion. After erysipelas, the paint proves of the greatest service, perhaps, in eczema in its several forms. In chronic eczematous eruptions of the aged it affords much comfort, and often speedily effects a cure. Of late years I have extended its employment to other complaints of the skin, including herpes in its several forms. I have tried it in some cases of smallpox, with the view of diminishing the number of vesicles on the face, and of controlling their size. The latter indication it seems likely to fulfill; but I cannot speak with confidence about the former, the papules being already numerous at the time of my visit. I have also used it in several cases of carbuncle and furuncle. The first was in the instance of a huge carbuncle, situated on the loin of a man, and rapidly extending, notwithstanding free incisions, linseed poultices, and appropriate constitutional treatment. I applied a thick, wide circle of paint round the swelling, and dressed with resin ointment and cotton wool. There was no advance of the disease from that time, the centre rapidly broke up, and recovery took place. It is, however, probable that the omission of the warm poultice may have contributed to the improvement, for I have often observed that warm poultices, however well made, seem to foster and spread carbuncular inflammations.

"The paint seems to act in two ways: first, and chiefly, as an efficient excluder of the air—that great irritant to the cutaneous surface when disordered; and, secondly, as a direct sedative to the sentient nerve filaments, rendering them less prone to become involved in inflammatory action. In boils it re-

lieves the painful tension, and favors resolution. In some forms of painful ulcers of the leg, of a small size, it gives great relief. In galling of the skin, where anasarca is present, it is also of use, and is the best application that we have in burns of the first and second degree. But it is in erysipelas that its triumph is most manifest; the patient soon finds the comfort of it; the tight shining skin soon becomes wrinkled and shrunken; indeed, the inflammation very rarely extends after the second or third painting.

"All my friends to whom I have recommended the pigmentum album speak highly of it; and one, who is a surgeon in the Peninsular and Oriental Company's service, has used it for the last two years with great success. The manner of applying it is by means of a feather, painting the affected parts and a *little beyond*, and laying on a fresh coat every two hours or so, until a thick layer is obtained, and then sufficiently often to maintain a covering. In erysipelas it peels off in a week or so with the shed cuticle, leaving beneath a smooth, clean, healthy surface. Patients are struck with the benefits they derive from its employment."—*Lancet*, June 18, 1859.

Treatment of Fissure of the Anus by Injections of Rhatany.

By Dr. TROUSSEAU.

"We have seen recently," writes the foreign correspondent of the journal from which this quotation is made, "a somewhat deep and painful fissure of the anus successfully treated by M. Trousseau, by means of injections of rhatania administered several times in the twenty-four hours, together with the use of mild laxatives. It resulted from painful defecation, the bowels having been constipated for some days previously. The sufferings of the patient were intense, and lasted for fourteen hours consecutively. In reference to anal fissure, Trousseau denies the old theory, that it is produced by spasmodic action of the sphincter; on the contrary, he believes that it is most generally the result of irritation caused by the acrid discharges of the vagina finding their way to the anal mucous membrane, and completed during a state of constipation. Although spasm of the sphincter is almost an invariable accompaniment of this painful complaint, it can only, according to Trousseau, be regarded as an effect; in other words, the spasmodic action is entirely voluntary, and kept up by the patient in order to save herself the pain to which the irritable fissure gives rise, as is the case with a child who, when laboring under a chopped lip, purses up its mouth when it eats or laughs. M. Jobert adopts the same view as Trousseau; both condemn Boyer's method, which consists in the division of the fibres of the sphincter muscle, as altogether unnecessary."—*Med. Times and Gazette*, Feb. 5, 1859.

Selections.

SEQUELÆ OF MEASLES AND SCARLATINA.—M. Scoutetten, of Metz, has devised the following method to prevent the unfortunate sequelæ so frequently supervening after an attack of measles or scarlatina, as well as to prevent the necessity of confinement to the sick chamber for several weeks after convalescence :—"As convalescence commences—that is to say, when the skin is no longer red with the eruption—he rubs over the whole body slightly warmed oil of sweet almonds or olive oil, and puts the patient in bed again, for two hours. The next day he gives him a tepid bath for an hour, then places him in bed, and if the skin is very dry a new friction with the oil is made. These two frictions and one bath are usually enough to remove all danger. Still, in severe cases, it is well, to avoid any risk, to repeat the means indicated from time to time, until the skin regains its suppleness. These precautions taken, convalescents may be permitted to go out without fear of bad results."—*Braithwaite's Retrospect.*

POISONING BY STRYCHNIA.—The poison of strychnia is completely neutralized by nicotine. In a case of poison by the former, take a cigar and infuse it in a half pint of water, which give in doses of one tablespoonful every five minutes. Probably when half the quantity is taken a favorable change will be noticed : the muscles will have become relaxed, the spasms less severe, and the intervals between them longer. The infusion may then be given less frequently. Of course, in a healthy person such quantities of tobacco internally administered would produce serious effects ; but in this case its effects are antagonized.—*Ibid.*

STYPTIC.—*Solid Perchloride of Iron.*—The perchloride of iron is manufactured in a solid form by Messrs. Hopkins & Williams, of New Cavendish street, in which state it is particularly manageable as a styptic. Another, and perhaps superior way of using it, is to apply, by means of a spun-glass brush, a small quantity of the thick brown fluid, into which the solid perchloride kept in a bottle always deliquesces. It is particularly useful in such cases as excision of the tonsils, bleeding from the deeper-seated gums, &c. No inflammatory action follows this drug.—*Ibid.*

SCARLATINA.—Chlorate of potash must not be given in scarlatina, with the idea that in chlorine something like a specific has been found for the disease—if so given it will fall into disrepute. It is a very valuable remedy for meeting particular indications in the treatment of disease, by arresting the ulcerative inflammation of the fauces, and by its arterializing properties, supporting the restorative powers of nature, when aided by other appropriate treatment. It may be combined with carbonate of ammonia, with the best effects.—*Ibid.*

ASTHMA.—The remedial action of *strong coffee* in relieving an asthmatic paroxysm is well known—but there are two or three practical hints with re-

gard to its administration worth bearing in mind. It cannot be given too strong, and an excessive bulk is thereby avoided which oppressively distends the stomach, and its effects are less rapid. It is best given without sugar or milk, and very hot. It should always be given on an empty stomach, as, if given after a meal, it retards digestion, and thereby favors an attack.—*Braithwaite's Retrospect.*

NEURALGIA.—In cases of superficial neuralgia, especially facial, immediate and considerable relief will generally be obtained from the following local anodyne:—Two parts of spirits of wine or eau-de-cologne, one of chloroform, and one of tincture of aconite; the finger covered with a piece of lint or soft thick linen, is dipped in the liquor and rubbed on the part for a few minutes.—*Ibid.*

CHLORIDE OF SODIUM AS AN EXTERNAL RESOLVENT.—M. Ancelon affirms that chloride of sodium employed externally, whether in powder or incorporated with lard or linseed oil, forms a most admirable resolvent of indurated lymphatic glands. Frictions made with a pomade composed of it will induce an eruption resembling variola, which proves of great use in pulmonary phthisis and in chronic affections of the alimentary canal.—*L'Union Médicale.*

CITRATE ACID IN ACUTE RHEUMATISM.—Dr. Hartung states that this substance acts more efficaciously than lemon juice in acute rheumatism. He forms a mixture with six drachms dissolved in five ounces of syrup. This to be taken in from fifteen to thirty-six hours, the patient also drinking as much cold water as he pleases, and the parts being wrapped in wadding. Of forty-five cases of acute rheumatism, some of them very bad ones, so treated, in two only was the result not satisfactory. Sometimes, even after twenty-four hours of treatment, there is a notable diminution in the pain and fever, although in most cases from two to three days are required to produce this amendment. The remedy does not induce diarrhœa, and it favors transpiration.—*Gazette des Hôpitaux.*

MASTICH IN INCONTINENCE OF URINE.—Dr. Debout strongly recommends the employment of the tears of gum mastich in the incontinence of urine of children, in the dose of one drachm night and morning. It may be made into bolus, with syrup, or divided into pills. The cure is usually effected in four days; but if the remedy is not successful in eight days, it is useless to continue it longer. It has proved successful in more than two-thirds of the cases in which Dr. Debout has employed it.—*Union Médicale.*

ASCARIDES.—Use as a simple injection of water, containing five, ten, fifteen, or twenty drops of sulphuric ether, according to the age of the individual, and repeated more or less frequently, as necessary. The author states that this agent has a double advantage: it destroys the larvæ and allays the spasmodic and nervous symptoms produced by the animals.—*Braithwaite's Retrospect.*

Pharmacy.

[From the American Journal of Pharmacy, January, 1880.]

CERATUM CANTHARIDIS.

By Wm. R. Warner.

Take of

Spanish flies, in fine powder,.....	5 ounces.
Alcohol, 87 sp. gr. (95 per cent vol.),.....	q. s.
Rosin,.....	3 ounces.
Yellow wax,.....	6 "
Lard,.....	7 "

Moisten the powdered flies with the alcohol, and pack in a suitable percolator; gradually pour upon it the alcohol until it passes through without much color, which will require usually about two and a half pints. Then evaporate by a gentle heat to the consistency of a soft extract; add the resin, wax and lard; melt them together, and, occasionally stirring, maintain at a temperature of 212° for fifteen minutes. Strain through linen to separate the extractive and other insoluble matter that may be present, and stir until cool. This cerate should have a slight greenish-yellow hue, of rather firm consistency, and possessing in a perfect degree the active properties of the Spanish flies.

The above formula for *ceratum cantharidis* is offered as a substitute for the officinal cerate, from its elegance and greater efficacy, which has been fully attested. Its mode of preparation is not difficult, will, perhaps, afford more uniform results, and the additional expense from use of alcohol is scarcely worth considering, as this, in manufacturing largely, may be recovered by distillation. Slight economy may be practised by the use of hot or boiling alcohol, of which much less is required to exhaust the flies of their active principle. Repeated decocting of the flies in water will afford an aqueous extract, which, though containing the virtues of the fly, is not altogether eligible as a substitute for the alcoholic extract in the preparation of this cerate. The heating of the alcoholic extract with the ingredients of the cerate affords a solution of *cantharidin* in the oily matter, and at the same time a separation of the extractive.

According to the researches of Prof. Procter, the active constituent of cantharides in an *isolated* state is sparingly soluble in cold alcohol. In the process here given, however, alcohol is found to be an excellent menstruum, and does readily dissolve the *cantharidin*, while it is associated with a peculiar yellow extractive matter in the fly, as is likewise the case with many other organic principles. Hence it is that though ether is a ready solvent for *cantharidin*, and alcohol is not, the latter is a good menstruum for cantharides.

Philadelphia, October 1880

ADULTERATED NITRATE OF SILVER.

TO THE EDITOR OF THE LONDON PHARMACEUTICAL JOURNAL.

Sir:—An adulterated nitrate of silver has just come into my hands, of which it may not be useless to give a brief description:—

It was supplied by a London house, and is invoiced at four shillings per ounce.

It is wrapped in blue-tinted writing paper; is of a yellowish color; less translucent than the pure article, and presents a dull, close-grained fracture; the crystalline structure being very indistinct.

Altogether, it appears in such a "questionable shape," as at once to rouse suspicion.

The pure salt yields about 68 per cent of silver, but I found this sample to give little more than 55 per cent. The substance with which it is adulterated is nitrate of lead. A trace of iron is also present, which may account for its color.

The proportions are nearly—

Nitrate of silver,	88
Nitrate of lead,	12
Iron, trace,	

Total, 100

With cold distilled water it gives a turbid solution, owing probably to the presence of a difficultly soluble compound of lead, formed during fusion by decomposition of a small portion of the lead nitrate.

I enclose a specimen for your inspection, and, if you think the matter worth the notice of your readers, pray insert this note in your journal.

T. MILLER.

Sheffield.

[London Pharm. Journal.]

OPIATE BELLADONNA PLASTER.

Formula of M. Trousseau.

It is employed in the treatment of arthritis, simple or puerperal, threatening to pass into the chronic state.

Every one knows that in this case the ordinary termination is white swelling, and that then amputation is often necessary.

In order that the plaster may be useful it must envelope the articulation. We have only seen it employed for the knee, and the patients have come out cured.

Here is the formula:—

Bread,	750 grammes.
Camphorated alcohol,	100 "

Dip the bread, in pieces, in water until it is perfectly moistened; press strongly, and put into a saucepan on a water bath, and then add little by lit-

tie the camphorated alcohol. It is absolutely necessary that the whole, when cooled, be perfectly homogeneous, and preserve the form of the vessel so that it can be inverted without becoming detached. Spread the plaster upon a piece of tile broader than long; then apply the opiate belladonna mixture, made as follows:—

Extract of belladonna,.....	10 grammes.
Extract of opium,.....	5 “
Powdered camphor,.....	10 “

Add to the two extracts sufficient water to render them semi-liquid, and incorporate the pulverized camphor. Spread this mixture as evenly as possible on the plaster, leaving a little more in the middle. The edges are covered with glycerine to prevent adhering to the skin. •

After having moulded it upon the articulation, and covered it with gummed taffeta, bound on, with long flannel bands; then place the leg in an extension apparatus, fixing the foot. Change only every eight days. The plaster never has any odor.

Two or three generally suffice, and finally it is not dearer than the ordinary plaster, which requires to be renewed very often.—*Jour. de Chim. Med., and Druggist.*

SACCHARATED LIME FOR USE IN MEDICINE—CONCENTRATED LIME WATER.

Dr. Cleland has introduced a solution of lime in syrup for use, in preference to ordinary lime water, in medicine. He prepares it as follows:—Slake eight ounces of quick lime, rub up with it five ounces of white sugar, add one pint of water, stir for some time, till the hard, stiff masses which the sugar and lime are apt to run into are as much as possible dissolved; then filter. The product should be perfectly clear, and of a slightly yellowish tint. A solution made in this way will contain eighteen grains of lime in every ounce, by weight, and altogether about 106 grains of solid matter to the ounce. Taken undiluted, a few drops are sufficient to roughen the tongue. When diluted, the taste is at first an acrid one of lime; but this is immediately replaced by a sweet taste in the back of the mouth, admitted to be pleasant. Made as just recommended, the solution is not liable to decomposition, unless it is exposed to the air. By employing a smaller proportion of water to lime, a still stronger solution may be obtained, but not with any practical advantage, as there is increased difficulty of filtration and greater tendency to decomposition. The strongest solutions are scarcely, if at all, affected by boiling, but if diluted a copious precipitation takes place on application of heat. This, however, will not serve as a test of strength, as addition of sugar in sufficient quantity will make any solution, of whatever strength, remain clear on ebullition. This preparation may be given in doses of from twenty or thirty to sixty minims or more, in a glass of water, two or three times a day.—*London Pharm. Journal.*

SYRUP OF PHOSPHATE OF IRON AND MANGANESE.

In the absence of any authorized formula for this syrup, and in answer to several correspondents, we insert the following:—

R.—Phosphate of iron,	72 grains.
“ manganese,.....	48 “
Glacial phosphoric acid,.....	3 vi.
Sugar,.....	℥ x.
Water, sufficient to make f.,.....	℥ xij.

Dissolve the phosphoric acid in a small quantity of water, add the phosphates, and apply heat till dissolved, then add the sugar and the remainder of the water, so that the product may measure twelve fluid ounces.—*London Pharm. Journal.*

FORMULÆ FOR SYPHILITIC AFFECTIONS.

Bichloride of mercury,.....	8 grammes.
Concentrated hydrochloric acid,.....	4 “
Spirits camphor.....	8 “
Water,.....	1 gallon.

Dose, four to eight grammes.

Bichloride of mercury,.....	8 grammes.
Iodide of potassium,.....	180 “
Tincture of cardamon,.....	60 “
Water,.....	1 gallon.

A dose of four grammes contains one-half of a centigramme of the iodide preparation.

The *red pomatum*, much used for severe ulcerations, is made of—

Bisulphuret of mercury,	15 grammes.
Nitrate of mercury,	15 “
Oreasote,.....	20 drops.
Lard,.....	480 grammes.

[*Edinburg Medical Journal.*]

DOUBLE IODIDE OF IRON AND QUINIA.

Take sulphuret of barium of sufficient quantity, dissolve in hot water and filter; add, in small quantities, tincture of iodine, to precipitate the sulphate and form iodide of barium; filter, then warm to evaporate the alcohol, then add in small quantities a concentrated solution of sulphate of quinine, which forms a sulphate of baryta and iodide of quinia; filter, and then add a solution of one pint of proto-iodide of iron to three parts of water. Upon warming, the iodides of iron and quinia deposit together, and form the double iodide.

Pills.

Double iodide,.....	10 grammes.
Honey,.....	10 “
Liquorice, in powder,.....	q. s.

Make sixteen pills. , Dose, from two to six pills a day. If used in the form of a syrup, the dose is from one to two spoonful a day.

Much used in scrofulous affections, chlorosis, pulmonary affections, &c., and in those affections where the extract of cinchona and powdered iron are prescribed, or the iodide of iron with the wine of cinchona, being a preparation more conveniently administered.—*Bulletin Gén. de Thérapéutique.*

COMPOUND SYRUP OF PRUNUS VIRGINIANA.

By Dr. Henry Bradford, of Rock Bluffs, Nebraska.

In an epidemic influenza characterized by a profuse secretion of mucous and considerable spasmodic action, in some cases simulating whooping cough, I found the following to speedily check the disease:—

R.—Syrup prunus virg.,.....	3 iv.	
Vin. ipecac, vin. antimonii,.....	aa. 3 ss.	
Tincture cannabis indica,.....	3j.	
Gallic acid,.....	3 ss.	M.

Dose, a teaspoonful every three or four hours.—*Druggists' Circular.*

Editorial.

PROCEEDINGS OF THE NEW YORK STATE MEDICAL SOCIETY.—This State Association held its fifty-fourth annual meeting at Albany on the 7th of last month. Over one hundred and fifty delegates were present, comprising many of the most distinguished physicians of the State.

The following officers, for the ensuing year, were elected:—

President—Daniel T. Jones, of Onondaga County.

Vice-President—E. H. Parker, of Poughkeepsie.

Secretary—Sylvester D. Willard, of Albany.

Treasurer—J. V. P. Quackenbush, of Albany.

Publication Committee—Thos. Hun, S. D. Willard, and Howard Townsend.

Censors were appointed for each district, also Committees of Correspondence. Names were recommended for election as permanent members, and others nominated.

Nominations for Honorary Members—Dr. Braithwaite, London; Dr. Wm. Carpenter, do.; Oliver P. Hubbard, Hanover College; P. A. Jewett, New Haven; Prof. D. Crosby, New Hampshire.

For Election as Honorary Members—Alfred Stillé, Philadelphia; George Mendenhall, Ohio; J. Mason Warren, Boston; Warren Stone, New Orleans; Ernest Hart, London; B. H. Catlin, Connecticut.

Committee on Epidemics—First District, F. Hams; Second District, C. A. Lee; Third District, T. C. Brinsmade; Fourth District, A. F. Doolittle; Fifth District, Luther Lultheaw; Sixth District, A. Willard; Seventh District, E. Carr; Eighth District, H. M. Conger.

Delegates to the American Medical Association—S. Foster Jenkins, New York; Dr. Goran, Rockland; Dr. Wilbur, Syracuse; Thos. Hun, Albany; Caleb Green, Homer; Dr. Blatchford, Troy;

Dr. Brinsmade, do.; A. Clark, New York; A. L. Sanders, Madison; H. Deering, Utica; Aaron Green, New York; C. A. Lee, Peekskill; Dr. Hall, Auburn; J. F. Trowbridge, Syracuse; F. H. Hamilton, Buffalo; Daniel P. Bissell, Utica; Seth Shove, Westchester; B. Fordyce Barker, New York; Ferris Jacobs, Delaware; Joseph Beattie, Geneva; Theodore L. Mason, Brooklyn; Wm. Rockwell, New York; B. P. Staats, Albany; W. W. Strew, Queens.

Honorary Degrees of Medicine—Francis J. D'Avignon, Clinton; Harrison Teller, Brooklyn; Peter Moulton, New Rochelle.

Many valuable reports and voluntary papers were presented to the Convention, and referred to the Publication Committee.

The subject of adulterated medicines came up before the Society, and resulted in the appointment of a Committee, of which Dr. Squibb is chairman, to report upon some measure calculated to correct this growing evil. This is a movement in the right direction. But so long as there is a demand for cheap medicines will they be furnished; when the demand ceases, then will the supply cease, in a measure. It is a general complaint among many physicians that they cannot afford to use medicines of a high cost, and which solely relates to its purity and cost of preparation. This is a great mistake. The remedies they use, of a second-rate quality, fail to produce the results they wish—their reputation suffers. While, if a pure article of, perhaps, twice the cost had been employed, it would have materially advanced their reputation for skill and extended their practice. Money invested in pure medicines is to them as capital to the tradesman, or good tools to the mechanic, scarcely one of them would be found to employ the latter to construct a residence, unless he possessed not only skill, but the necessary tools to perform his contract in the best manner.

If the charges made by the country physician are not adequate to afford him a living, and compel false economy in his investments, then advance the rate 50 or 100 per cent; for there is no profession which demands so much study, investigation, science, and physical labor as this, that is as poorly paid, particularly in the country.

A great change has taken place in ten years in respect to adulterations; a steady hand will in time work out the evil. It is a matter regulated entirely by the cupidity of man when adulteration shall cease to be profitable; then, and not till then, will it cease. The consumer must demand reliable and pure medicines; must understand whether he gets them or not, which involves a knowledge of appropriate tests, &c.; and whenever found impure, if promptly returned to the vender, will cause care in future. The subject is one which can only be worked out by beginning with the consumer, and working *backwards*—not as has heretofore been done, by constantly hammering at the adulterator with threats of exposure, but if instead, when detected by the consumer, his goods are rejected and left on his hands, it ends in total loss, and of course defeats his plans.

LONG ISLAND COLLEGE HOSPITAL, AT BROOKLYN.—This institution has been recently organized with a very efficient corps of professors, all men of talent, energy and reputation, which ought to insure a good class and success to the enterprise.

The first course of lectures will commence on Thursday, March 29th, and continue sixteen weeks.

The faculty are as follows:—

Austin Flint, M. D. (New Orleans School of Medicine), Professor of Practical Medicine and Pathology.

Frank H. Hamilton, M. D. (University of Buffalo), Professor of Surgery.

James D. Traak, M. D., Professor of Obstetrics and Diseases of Women and Children.

R. Ogden Doremus, M. D. (New York Medical College), Professor of Chemistry and Toxicology.

Joseph C. Hutchinson, M. D., Professor of Surgical Anatomy and Operative Surgery.

John C. Dalton, M. D. (College of Physicians and Surgeons, New York), Professor of Physiology and Microscopic Anatomy.

De Witt C. Enos, M. D., Professor of General and Descriptive Anatomy.

Edwin N. Chapman, M. D., Professor of Materia Medica and Therapeutics.

J. G. Johnson, M. D., Demonstrator of Anatomy.

HYDROCYNATE OF IRON.—Dr. John Keene, of Prince Edward's Island, N. S., says:—"I have used it with benefit in epilepsy, and in cases of neuralgia, in combination with quinine and morphine. I have found it of great benefit."

A communication from Monticello, Iowa, says:—"I have used two ounces, and my son is improving very rapidly in health."

SOLIDIFIED COPAIBA.—Dr. Polk, of Delaware, says:—"Solidified copaiba, in dragees, cannot be too highly praised; it seems to act better in this than in any other forms." We give this, as the question is frequently asked concerning the action of solidified copaiba compared with *it in capsules*.

THE Chicago Medical Examiner made its first appearance last month, and is conducted by Drs. N. S. Davis and E. A. Steele. Dr. Davis was formerly editor of the *Chicago Medical Journal*, and brings to the new journal great experience in the duty he has assumed—talent and energy which cannot fail to make his journal one of practical advantage to the medical profession.

THE Kansas City Medical and Surgical Review is the name of a new journal recently started; it is edited by Dr. G. M. Maughs and T. S. Case, and is designed for the profession in the West. We wish it a successful and useful career.

THERAPEUTICS AND MATERIA MEDICA: A Systematic Treatise on the Action and Uses of Medicinal Agents, including their Description and History. By ALFRED STILLÉ, M. D., late Professor of the Theory and Practice of Medicine in the Medical Department of Pennsylvania College. Philadelphia: Blanchard & Lea. 1860.

Dr. Stillé has long been before the public as an author, and is favorably known in the medical literature of this continent. His writings have secured for him a notoriety and fame in the literary horizon that will characterise him as a star of the first magnitude. His *Therapeutics and Materia Medica* is an invaluable addition to the science of medicine, and every medical student will be amply rewarded by its study. Practitioners of medicine will find much in

it new and interesting. On every page will be found ample evidence of the scholar, the careful observer, and the physician of science.

We, therefore, cheerfully recommend it to the medical profession, as one of the best standard works in the department of which it treats. It is a work of sterling value and surpassing merit.

HANKIN'S HALF-YEARLY ABSTRACT OF THE MEDICAL SCIENCES. Being a Practical and Analytical Digest of the Contents of the Principal British, American, and Continental Medical Works published during the preceding six months.

The above title explains the work fully. In it will be found a large amount of valuable information for the practitioner, classified and arranged so as to be convenient for reference.

The volume for January can be had by addressing Lindsay & Blakiston, Philadelphia.

KENDALL'S ANEROID BAROMETER.—At the recent lectures at Yale College, upon sciences and agriculture, Prof. Silliman, Jr., upon the subject of meteorology, devoted an hour mainly to the description of the several kinds of barometers, and gave a general idea of the isothermal lines and the distribution of cultivated crops over the continent. Of the aneroid barometer, which he deemed the most important instrument that could be placed in the hands of the farmer, he said:—

"This admirable barometer consists merely of a tight circular brass box, the sides of which are quite thick, and the cover very thin. The cover is corrugated in circles, to give it strength. The cover is made so thin that it may rise and fall with the variations in the atmospheric pressure; and, as it has been found that with a plate of even thickness the rising and falling in will be absolutely unavoidable one time with another with a given pressure of atmosphere upon it, the inventor has arranged on the cover a combination of delicate levers touching the sides, and with a fixed point in the centre, the motions of which work a pointer around a graduated dial, or clock-face. The air has been exhausted from the box before it was hermetically sealed, and there being nothing inside to prevent the dial-plate from bending inward, it does so when the outside air becomes heavier, and, of course, springs back to its old place when that extra pressure is removed. Unqualifiedly it is the best for the farmer's use; and for the scientific man, its portability, and almost total unliability to accident, strongly recommend it. The old mercurial barometer, with its marks of 'cloudy,' 'rain,' 'fair weather,' &c., is utterly unreliable; for, the pressure of the atmosphere at divers heights is different, and the pressure that near New York rise to 'foul weather' would at a higher place, say the prairies, stand at 'fair.' And then, again, if roughly handled, air will leak into the instrument, and its value be utterly destroyed. The 'aneroid' barometer (or the 'without fluid' barometer) was first invented by M. Comte, a professor at the École Polytechnique, at Meudon, near Paris, but a Yankee mechanic, Mr. E. Kendall, at New Lebanon Springs, N. Y., has made it much cheaper, and equally reliable as the expensive French instrument. If Mr. Kendall is not a greenhorn of the first water, he will advertise it in all the prominent agricultural papers of the country."

Mr. Kendall supplies these instruments at the low price of \$10, about half the cost of portable mercury barometer.

CORRESPONDENTS will oblige by writing plainly their names, town, county and State. We have, in several instances, been unable to answer letters because these are omitted. A letter from S. F. Williard, Madison, we are unable to answer, as the State is not given.

SUBSCRIBERS will please notify us if they do not receive the JOURNAL regularly.

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APRIL, 1860.

[No. 4.]

Indigenous Bitter Tonics.

BY CHARLES A. LEE, M. D.

NUMBER IV.

HELONIAS DIOICA.

(*Devil's Bit—Blazing Star—False Unicorn.*)

THE natural order *Melanthaceæ*, to which this plant belongs, includes numerous bulbous, tuberous, or fibrous-rooted herbaceous plants, possessing medicinal properties—most of which are acrid and virulent, though some are mild and innocuous. To it belong the *asagrea* (which yields the *veratria*), the *veratrum*, *colchicum* and *trillium*, as well as the *xerophyllum*, the *melantheum*, *uvuluria*, and the *helonias*. All the plants belonging to the order have polygamous or dioecious flowers, with sessile leaves, more or less clasping or sheathing. The order includes twelve genera and twenty-one species in the Northern and Middle States, all of which are medicinal.

We have given the name *helonias dioica* to this plant, because it is that given to it by Pursh, and by which it is described in most botanical works. It is, however, the *chamælirium lutea* of Gray, the *C. carolinianum* of Willdenow, the *veratrum luteum* of Linneus, and the *helonias luteum* of Aiton; while the *helonias* of Gray and Michaux includes but one species, the *bullatta*, which is very

rare. The *blazing star* is a smooth herb, from one to three feet high, with a wand-like stem, springing from a thick and abrupt tuberous root stalk, terminated by a long and wand-like spiked raceme of small, white bractless flowers, the fertile plant more leafy than the staminate; the leaves are flat, lanceolate, the lowest spatulate tapering into a petiole. The *helonias* derives its name from a Greek word signifying *swamp*, the place of growth. It is unnoticed in the U. S. P. It is found from New England to Georgia.

Chemical Composition.—Your recent analysis gives, of—

Organic Matters,	-	-	-	-	-	-	95.00
Inorganic Matters,	-	-	-	-	-	-	5.00
Total,	-	-	-	-	-	-	100.00
Gum,	-	-	-	-	-	-	0.811
Albumen,	-	-	-	-	-	-	4.142
Starch,	-	-	-	-	-	-	6.681
Extractive,	-	-	-	-	-	-	11.488
Bitter Principle,	-	-	-	-	-	-	9.501
Coloring Matter,	-	-	-	-	-	-	18.657
Oleo-Resin, insoluble in alcohol,	-	-	-	-	-	-	2.742
Soluble Salts,	-	-	-	-	-	-	4.221
Insoluble Salts,	-	-	-	-	-	-	0.779
Lignin, &c.,	-	-	-	-	-	-	45.985
Total,	-	-	-	-	-	-	100.000

This analysis shows that the plant belongs to the class of pure simple bitters, containing neither volatile oil (except in combination with resin), nor tannin, nor gallic acid. It differs, however, from several of the same class, in containing no sugar, more starch, and less gum.

Therapeutical Properties.—The *blazing star* has long been employed in popular practice in many parts of the United States as a bitter tonic, anthelmintic, and emmenagogue. In Ohio and many of the Western States it is in very general use as a common emetic, operating with great certainty, but more activity than the *ipecacuanha* or the *eupatorium*. The root being the only part employed, numerous trials have satisfied us that it has a specific action on the uterine organs—an alterative, regulating influence over their functions. Hence in amenorrhea, marked by general

atony and an anæmic and torpid condition of the system, this plant proves of great service: giving tone to the digestive organs, favoring nutrition and sanguification, and promoting the secretions generally. So also in leucorrhea, associated with a similar condition of the general system, it will be found equally serviceable. Its influence as a uterine tonic is also well marked in cases of atonic or passive menorrhagia. Here, by imparting tonicity to the muscular fibres of the organ, and by a stimulating power over the plexuses of organic nerves which supply the pelvic viscera, the exudation of blood is checked, and the predisposing as well as proximate cause of the disease removed. If it has the power of obviating sterility and impotence, as alleged by some writers, it must be by a similar mode of operation. It may be slightly aphrodisiac, but there are no well-attested facts bearing on this point. It is very probable, however, that it may, in common with senecio and other uterine tonics, produce such effects; but if it does, I have no proof of the fact, except what may be drawn from analogy. It is very probable, also, that in cases of dysmenorrhea and liability to abortion from atony of the reproductive organs, it may prove highly advantageous by a similar mode of action, just as we find in the case of iron and other tonics which improve the general health. But, in addition to this, it would seem to be endowed, to a considerable extent, with specific properties and powers.

As a *simple bitter*, this plant ranks among the most valuable of its class. From its botanical affinities, which ally it so closely with the veratrum, it might be supposed to possess highly acrid and irritant powers; but experience proves that no such effects are observed when given in ordinary and appropriate doses. As a simple stomachic tonic, it will be found not only wholly unobjectionable, but highly useful. It has been used in many cases of general dropsy with marked success, particularly in persons of lax habit, broken constitution, and general debility. The results are doubtless partly due to the increased tone imparted to the capillary system, and partly to its stimulating the absorbent function, an effect common to it and other bitter tonics. It would seem, however, to possess, in addition, decided alterative and deobstruent properties: influencing secretion and excretion to a greater extent than tonics generally. Whether it has any specific

emetic powers may well be doubted; further trials are needed to settle this point. All bitter vegetable infusions, given freely, will cause emesis, as boneset, chamomile, &c. That it has any true anthelmintic or vermifuge properties remains also to be ascertained, or, at any rate, more than it enjoys in common with all simple bitters. After worms have been evacuated, it is an excellent corroborant to prevent their return, but no better than gentian, buck-bean, or gold thread. In atonic dyspepsia, convalescence from fevers and other acute diseases, the latter stages of dysentery, &c., this plant has proved of decided benefit in numerous cases.

Preparations and Administration: Infusion, decoction, fluid extract, solid extract, powdered root, helonin, tincture, syrup, wine.—The *infusion*, made with cold water (one ounce to a pint), contains all the active principles of the root, except the resinous matter, and may be used with advantage, although the bitter taste might in some cases prove objectionable. The *decoction* is liable to the objection already stated, viz: the oxidation and decomposition of the organic constituents. The *fluid extract* is, perhaps, generally to be preferred, combining as it does all the active principles in a very concentrated form. This is now kept in the shops, and may be procured of any of the agents of Tilden's preparations. Dose, one to three drachms. The *solid extract* has the advantage of the pillular form, and of being readily combined with other medicines. The *powdered root* is seldom employed. The *helonin* of Tilden's preparation is the *oleo-resinoid* matter in combination with the *bitter principle*. It is a deep brown granular substance, resembling very dark-colored maple sugar. It is very bitter to the taste, with no acidity, and wholly soluble in the mouth. It is also mostly soluble in cold water, but not in alcohol, and is a very eligible preparation. Mixed with water it forms a blackish-green opaque solution of great bitterness. The *helonin* of B. Keith & Co. is the powdered root mixed with common salt and the pulverized hydro-alcoholic extract. Mixed with water a great portion remains undissolved, forming a light yellowish mixture, and slightly bitter to the taste. Compared with Tilden's preparations of the same name, it is nearly inert. The average dose of pure *helonin* is about one-half a grain, of Keith's preparations three grains. The eclectics advise its combination with hydras-

tin, myricin, senecin, leptandrin, ampelopsin, iron, podophyllin, digitaline, sanguinarin and xanthoxylin, according to the existing indications. These compounds, however, are recommended chiefly on theoretical grounds, and not from any actual results derived from their use. That some of these combinations, however, may prove useful in certain cases, is highly probable, especially when the preparations are reliable.

HYDRASTIS CANADENSIS.

(*Orange Root—Yellow Puccoon—Yellow Root—Ground Raspberry—Golden Seal—Turmeric Root, &c.*) Natural Order, *Ranunculaceæ*; Sexual System, *Polyandria Polygamia—the Root.*

The *hydrastis*, a plant peculiar to North America, of which but a single species is known, is a low, perennial herb, sending up in early spring, from a thick and yellow, knotted rootstock, a single radical leaf, and a simple hairy stem, which is two-leaved near the summit, and terminated by a greenish-white flower. It abounds in rich woods throughout most of the United States. Its leaves are rounded, heart-shaped at the base, five to seven-lobed, doubly serrate, and when full grown in summer from four to nine inches in width. The root is perennial, of a bright yellow color, tortuous, rugged, and with many long fibres. The stem is about one foot high; the flower single, and white or rose-colored. The fruit is a berry of a red color, resembling the raspberry, formed of many oblong granulations, each of which contains one or two obovate seeds of a black color, having a minute embryo at the base of a fleshy and oily albumen. The flowers appear in April and May, and are short-lived, the petals falling off soon after they expand. The root of this plant has been used from time immemorial by the Indians as a dye, as well as for medicinal purposes. It dyes silk, wool and linen a brilliant yellow color, which is said to be permanent, and by adding indigo a rich blue is produced. It is somewhat remarkable that this root has not more generally been employed in the arts. It has a strong, somewhat narcotic odor, and very bitter taste.

Chemical Composition.—Tilden's analysis of the root of *hydrastis* yields—

Organic Matter,	-	-	-	-	-	-	89.168
Inorganic Matter,	-	-	-	-	-	-	10.832
Total,	-	-	-	-	-	-	100.000
Gum,	-	-	-	-	-	-	6.05
Albumen,	-	-	-	-	-	-	5.22
Starch,	-	-	-	-	-	-	5.04
Extractive,	-	-	-	-	-	-	3.57
Sugar,	-	-	-	-	-	-	7.23
Fixed Oil,	-	-	-	-	-	-	2.88
Coloring Matter, or yellow Bitter Extractive,	-	-	-	-	-	-	7.65
Particular Matter,	-	-	-	-	-	-	4.42
Resin,	-	-	-	-	-	-	2.77
Soluble Salts,	-	-	-	-	-	-	2.53
Insoluble Salts,	-	-	-	-	-	-	2.30
Lignin, &c.,	-	-	-	-	-	-	44.34
Total,	-	-	-	-	-	-	100.00

The bitter principle, *hydrastina*, when pure, is either in the form of crystals or an amorphous powder of a bright yellow color, resembling chromate of lead. It is entirely soluble in alcohol, water and alkaline solutions, insoluble in ether, and has a very bitter taste. It may be distinguished from the various extracts of the plant by its beautiful yellow color. The alcoholic extract, for example, is of a brownish-yellow, resembling the powdered root—partially soluble in water, soluble in alcohol. As the alcoholic extract contains both *hydrastina* and the oleo-resin, water only dissolves the former. One hundred parts give of *hydrastina* 30.25; resin, &c., 69.75=100. The color and properties of the hydro-alcoholic extract are the same as the alcoholic extract, containing less resin, but about the same per cent of *hydrastina*. The color of the aqueous extract is brighter than that of the alcoholic or hydro-alcoholic extract, and contains about the same amount of *hydrastina*, without any resin, but mixed with gum, starch and extractive matters. Besides the *alkaloid*, *hydrastina*, the root contains a *resinoid*, *hydrastin*, and a *neutral* substance, also called *hydrastin*.

Therapeutical Properties.—As a powerful tonic bitter, the *hydrastis* takes rank among our most valuable indigenous plants, and is well adapted to all cases where such remedies are indicated. It has been extensively employed of late years, both by botanic

and eclectic physicians and by regular practitioners; and there is a very general concurrence of opinion that, while it exercises a specific influence over mucous surfaces, it acts upon the hepatic function as a cholagogue, and upon the glandular system generally as a deobstruent. It must be remarked, however, that the resinoid extract, hydrastin, obtained by the solvent action of alcohol, differs essentially in its effects from the alkaloid, hydrastina, proving highly irritant and stimulating, while the latter acts chiefly as a simple bitter only. In inflammatory or irritable conditions of the gastro-enteric surfaces, the former preparation will therefore be found objectionable. The resinoid, indeed, has been considered so powerfully irritating as to be recommended by some botanic physicians as an escharotic. However this may be, the infusion, watery fluid and solid extracts, and the alkaloid, will be found free from this objection. Where a general deobstruent and alterative effect is desired, an alcoholic or hydro-alcoholic preparation should be selected."

The cases in which we have known this plant used with most success were atonic dyspepsia, attended with torpidity of the liver, languid circulation, and constipated bowels. It seemed to quicken the portal circulation and excite the hepatic function in a very decided manner. The mucous secretions generally were at the same time increased, while the digestive organs assumed a more healthy condition, as evinced by the increase of appetite, and the removal of acidity, flatulence and eructations. We are also satisfied of its useful alterative effects in scrofulous and chronic cutaneous affections, proving laxative to the bowels, and at the same time influencing the secretions generally. In chlorotic amenorrhea it has also proved a very successful remedy in combination with some of the chalybeates. The resinoid, in union with iron (by hydrogen), will be, perhaps, the most eligible. In cases of general debility, and at the stage of convalescence, the alkaloid, hydrastina, in pill, has been found useful, increasing the appetite and promoting nutrition, while it has no tendency to check the action of the glandular organs. It has been used to some extent in intermittent fevers, especially when associated with torpidity of the liver, and, it is said, with very marked success. There is no proof, however, that it possesses any greater antiperiodic power than the bitter tonics generally, though, from

its deobstruent properties, it may be better suited to such cases than articles which are destitute of such powers. Some eclectic practitioners place great reliance on it in cases of chronic cystitis and gravelly affections: giving the resinoid in small and oft-repeated doses. It may well be doubted, however, whether it exerts any specific influence over the genito-urinary organs. As a general alterative, it doubtless may exert an important curative effect in this class of diseases. The same remark will apply to its use in leucorrhea and chronic urethritis from gonorrheal virus. It is unnecessary to speak of the principles which should guide us in combining this with other remedies, as they are the same as should influence all medicinal combinations. These have been so fully stated and illustrated by Dr. Paris as to need no additional elucidation. To his "Pharmacology," therefore, we refer the reader for all that can be said on this subject. As to the local applications of this remedy, we have little personal experience; but we are informed that it has been usefully employed as an injection (3j. of the neutral or alkaloid to one pint of boiling water) in gonorrhea, gleet, leucorrhea, chronic cystitis, &c.; while it is also recommended to be snuffed up the nostrils in chronic catarrh, applied as a wash in ophthalmia, and an injection in otorrhea. For such purposes we doubtless have far better remedies than this. Its legitimate uses are such as have been above indicated.

Preparations, Doses, &c.: Infusion, decoction, powder, fluid and solid extract, hydrastin (resinoid), hydrastin (neutral), hydrastina (alkaloid), tincture, syrup, compound tincture, lotion, compound infusion.—Of these, the fluid and solid extracts and hydrastina are preferable as simple tonics; as alteratives, emmenagogues, or cholagogues, the neutral, resinoid, or tincture are to be chosen. The dose of the fluid extract is from half to two drachms; of the solid extract, two to five grains. The hydrastin and hydrastina are administered in doses of from one to three grains. Of the tincture, made with ℥ iij. of the fluid extract to one pint diluted alcohol, half an ounce is the ordinary dose. The compound infusion, which is recommended as a gargle in various forms of sore mouth and ulcerated sore throat, is made of ℥ ss. each of the fluid extract of golden seal, blue cohosh, and witch hazel, with 3j. alum, 3 iij. honey, and one pint of water. An

elegant stomachic bitter may be prepared by adding one drachm of hydrastina to one pint of Sherry or Madeira wine, of which a dessert spoonful would be a dose.

POLYGALA RUBELLA (*Bitter Polygala*).

(Natural Order, *Polygalaceæ*; Sexual Systems, *Diadelphus*—*Octandria*.)

The *Polygalaceæ*, or *Milkwort Family*, to which this little plant belongs, includes, within North America, two genera, *polygala*, with two species, and *krameria*, with one, all the former endowed with active medicinal properties. Of these, the *polygala senega*, or *senega snakeroot*, is best known, and in most general use. The name of the genus is derived from two Greek words signifying *much* and *milk*, from a fancied property of its increasing this secretion. Plants belonging to this order are both herbaceous and shrubby, having entire and alternate leaves, without stipules, and often verticillate at the lower part of the stem. The flowers are in racemes or terminal spikes, and generally small. The roots are bitter and sometimes milky. Representatives of the order are found in almost all parts of the world, and everywhere they are considered as medicinal—some being bitter tonics, others expectorant, emetic, cathartic, diaphoretic, diuretic, emmenagogue, saponaceous (used for soap), and highly poisonous.

The *polygala rubella* of Willdenow and Bigelow is the *P. polygama* of Walter, Torrey and Gray, and others. Its stems are numerous, and spring from a biennial root, mostly simple, angular, ascending, very leafy, six to nine inches high, with oblanceolate or oblong leaves; terminal raceme, many flowered, purple, with eight stamens; radical flowers racemed on short runners on, or beneath the ground. Bigelow has drawn attention to this peculiarity, which is found also in several other species of rubella, where a part of the fruit is produced by a kind of imperfect flower growing close to, and, in some instances, under the ground. The plant is found in dry, sandy fields and woods, from Canada to Louisiana, flowering in June and July. The root is somewhat fusiform and branching.

Chemical Composition.—Analysis shows the usual organic constituents of the simple bitter plants, as gum, albumen, starch, sugar, bitter principle (neutral and resinoid), soluble and insol-

ble salts, lignin, &c. There is a small amount of resinoid matter, but the active bitter principle is wholly soluble in water, both hot and cold.

Therapeutical Properties.—The *P. rubella* is very similar to the *P. amara* of Europe, which has long been regarded as one of the most valuable bitter tonics. Paulus, Dioscorides, Galen and Pliny speak of it as a remedy for exciting the lacteal secretion. The Arabian writers have, as usual, only copied the Greek and Latin writers in relation to its medical properties. Bigelow speaks of the *P. rubella* as extremely bitter, and as a useful tonic and stimulant to the digestive organs, acting as a laxative and diaphoretic in large doses. It seems to be a pure, simple bitter, acting as a stomachic tonic in small doses, and as a sudorific and cathartic in large doses. Several other species of the plant have the same properties.

Preparations.—The same as the other bitter tonics already described. The infusion should be made with two ounces of the root to a pint of water. The dose of the powdered root is about one scruple; of the fluid extract, one drachm.

ALETIS FARINOSA (*Mealy Starwort*).

(*Star Grass—Blazing Star—Aloe Root—Bitter Grass—Unicorn Root—Ague Root—Ague Grass—Star Root—Devil's Bit—Cole Root.*) Natural Order, *Hamnifloraceæ* (*Bloodwort Family*); Sexual System, *Hexandria—Monogynia*.

The *Bloodwort Family*, so called from many of the plants belonging to it having a red juice, includes but three genera within the United States, viz: *luchnanthes*, *sophiola*, and *aletis*, each of which, except the last, has but a single species, but all have the same bitter tonic qualities. It has representatives, however, in every quarter of the globe; generally large herbaceous plants, with fibrous, perennial roots, and permanent, uniform leaves, mostly in two ranks. The *A. farinosa* is found in most parts of the United States, in fields and about the borders of woods, and flowers in June and July. The stem is from one to three feet high, invested with remote scales; the leaves, six to twelve in number, spread close to the ground, in a radiated manner like a star, and are sessile, nerved, lanceolate, and smooth. The flowers,

which are white, form a slender, scattered spike, with very short pedicles and no calyx. The flower has a roughish, mealy appearance, by which the name was suggested. The root is perennial, small, black outside, brown inside, ramose, and crooked. For a more particular description, see Bigelow and United States Dispensatory. The genus, which is peculiar to North America, includes two species. The *A. aurea* differs from the *A. farinosa* in having yellow, bell-shaped flowers, with short, ovate lobes, while those of the latter are white and oblong-tubular, with lanceolate-oblong lobes. Both species are more common at the South than at the North; and Rafinesque states that the *aurea* is found only in the Southern States. It flowers in June and July. In sensible as well as medicinal properties both species closely resemble each other.

Chemical Composition.—Your recent analysis of the root of this plant gives the following results:—

Organic Matters,	-	-	-	-	-	-	95.883
Inorganic “	-	-	-	-	-	-	4.167
Total,	-	-	-	-	-	-	100.000
Gum, -	-	-	-	-	-	-	4.066
Albumen, -	-	-	-	-	-	-	0.390
Starch, -	-	-	-	-	-	-	1.371
Extractive, -	-	-	-	-	-	-	2.395
Sugar, -	-	-	-	-	-	-	2.036
Coloring Matter, -	-	-	-	-	-	-	12.688
Bitter Principle, -	-	-	-	-	-	-	7.074
Resin, -	-	-	-	-	-	-	4.566
Soluble Salts, -	-	-	-	-	-	-	0.448
Insoluble Salts, -	-	-	-	-	-	-	8.719
Lignin, -	-	-	-	-	-	-	61.547
Total,	-	-	-	-	-	-	100.000

Analysis thus shows the root to contain the usual constituents of the bitter tonics, and a larger quantity of resinoid matter than is found in any of the others. It also contains a larger amount of bitter extractive. The tincture is more bitter to the taste than the infusion, and assumes a milky, turbid aspect on the addition of water. The per-salts of iron cause little or no change, showing the absence of tannin or gallic acid. To the resinoid the name *aletrin* may be given.

Therapeutical Properties.—It is believed that no American plant exceeds the *aletris* in intense and permanent bitterness. In this respect it is not inferior to aloes or quassia. It seems to be a pure bitter, having also some emetic and cathartic properties. As a tonic stomachic, it is not surpassed by any of our indigenous plants, and for this purpose it is extensively employed as a popular remedy, and in regular practice. It has long been held in high repute among the Indians. There is some reason to believe that it possesses narcotic properties. Rafinesque, who seems to have experimented a good deal with it, says that "only small doses must be used, because large ones produce nausea, dizziness, and narcotic effects," and that the powdered root should not be given in a larger dose than twelve grains. Its uses are the same as those of gentian and quassia. In some parts of the country it is used by botanics as a remedy for dropsy, dysentery and colic. We regard it as an alterative tonic, very similar to *hydrastis*. It deserves a more particular investigation.

Preparations.—The same as the other pure bitters. The infusion and tincture have been more generally employed. The *fluid extract* is prepared by the Tildens, and is an excellent stomachic, in doses of ten drops. The *aletridin* is given in pill, in doses of two to three grains. The *infusion* may be prepared by adding two ounces of the fluid extract to one pint of alcohol, the dose of which is about half a drachm. The *tincture* can be made of the root or the fluid extract, the latter in the proportion of 3 iij. to one pint of alcohol. Dose, thirty drops. The syrup is prepared with one ounce of the fluid extract to one pint of syrup. The solid extract is made into pills, of one or two grains each.

SABBATIA ANGULARIS (*American Centaury*).

(Natural Order, *Gentianaceæ*; Sexual System, *Pentandria—Monogynia*.)

The American centaury has an erect, angular and winged stem, one to two feet high, with ovate, acute, amplexicaul leaves; root biennial, yellow and fibrous. The stem has opposite branches, forming a smooth, angular corymb, with membranous wings at the angles. The flowers are terminal, numerous, and of a rich rose color, nearly white in the centre. This plant is very common in meadow grounds in most parts of the United States, flowering

in August and September. The whole plant is extremely bitter to the taste, and is officinal, yielding its virtues to alcohol and water.

Chemical Composition.—Tilden's analysis of this plant shows it to contain, of—

Organic Matters,	-	-	-	-	-	-	94.166
Inorganic “	-	-	-	-	-	-	5.834
Total,	-	-	-	-	-	-	100.000
Albumen,	-	-	-	-	-	-	1.723
Gum,	-	-	-	-	-	-	1.757
Starch,	-	-	-	-	-	-	4.580
Extractive,	-	-	-	-	-	-	5.714
Bitter Principle,	-	-	-	-	-	-	5.270
Sugar,	-	-	-	-	-	-	1.942
Coloring Matter,	-	-	-	-	-	-	1.142
Chlorophylle,	-	-	-	-	-	-	5.058
Resins,	-	-	-	-	-	-	4.870
Soluble Salts,	-	-	-	-	-	-	1.682
Insoluble Salts,	-	-	-	-	-	-	4.152
Lignin,	-	-	-	-	-	-	62.110
Total,	-	-	-	-	-	-	100.000

The usual constituents of the simple bitters are thus found in the sabbatia, without any astringent matter, and slight aroma. It contains a neutral principle (*sabbatin*) besides the bitter principle and extractive, both soluble in water.

Therapeutical Properties.—The entire plant has a very bitter taste, with slight aromatic flavor, neither unpleasant to the taste nor offensive to the stomach. It is much employed as a stomachic, and also in the milder grades of intermittent and remittent fever. Chapman says it has the advantage over the Peruvian bark of being susceptible of employment in every stage of these diseases. It has also been much used as an emmenagogue and vermifuge. As a pure bitter tonic it takes rank among the very best.

Preparations.—The usual mode of administration is the cold infusion, made with ℥ i. to a pint of boiling water. Dose, a wine-glass full.

The fluid and solid extracts of the centaury, as of other vegetables, possess some advantages over all other preparations. The tincture forms a good stomachic. The powder may be given in doses of a few grains.

Iron and Its Preparations.

[CONTINUED.]

FERRI OXIDUM HYDRATUM (*Hydrated Peroxide of Iron*).—This preparation has found its way into universal use as the antidote to white arsenic. Dr. Bunsen, of Gottingen, had, previous to 1834, made frequent experiments with it, which satisfied him that it was an efficacious agent, but, along with Dr. Berthold, he subjected it to a fresh examination. The results of their investigation were published, and since then it has received attention everywhere. It should be given in the form of magma, a soft and pulpy state. It forms with arsenious acid the arseniate of the protoxide of iron. $\text{Fe}_2\text{O}_3 + \text{AsO}_3 = \text{Fe}_2\text{OAsO}_3$.

Messrs. Bunsen and Berthold, from the results they have obtained, recommend this oxyhydrate as the chief antidote in all cases of poisoning by arsenic; and they advise emetics to be associated with it along with the agents hitherto employed—first, when the quantity of the poison taken has been considerable, and therefore a very large quantity of the antidote is demanded; secondly, when, at the same time, substances containing tannic acid, as infusion of green tea, or sulpho-hydric acid developed after the eating of eggs, may be suspected in the alimentary canal, as these substances are closely related to the antidote, and may weaken its action; and thirdly, when, prior to taking the poison, the stomach has been overloaded with food, and is therefore capable of receiving only a small portion of the antidote. But, whether vomiting be excited or not, recourse must be had to the oxyhydrate as speedily as possible. Tepid mucilaginous drinks may also be given to envelope the particles of arsenic that may exist in the compartments of the stomach. If the quantity of the poison taken be unknown, the antidote may be administered in a considerable dose; and if the patient should vomit, it may be given afterwards in smaller quantity.

But, if no vomiting should arise, it is recommended that he should continue to take the oxyhydrate until the arsenite of iron formed has had time to pass into the intestinal tube; and even after this, it may be persevered with in small doses for a time, as portions of arsenic may possibly remain behind unchanged. With

the same view, the oxyhydrate may be thrown up in the form of a clyster, whenever it is presumable that the compound, formed by the oxyhydrate and the arsenic, has reached the lower portion of the bowels. To aid this cathartics may be administered. Of these, castor oil, which would first suggest itself, might interfere, it has been conceived, with the operation of the antidote. Sulphate of magnesia, or any of the neutral salts, should have the preference.

As recommended in the Pharmacopœia of the United States, the hydrated oxide should be kept in the shops ready mixed with a definite quantity of water, in order that it may be always on hand so as to be administered without delay; and the recommendation is good. Even if not trusted to alone, the evidence is quite sufficient to show that it ought to be regarded as an important element in the treatment of every case in which arsenic has been taken.

It has been found, experimentally, that to thoroughly precipitate one part of arsenious acid, within five minutes, by the hydrated peroxide, twenty-two parts of the latter are needed. In the uncertainty as to the precise quantity of poison that has been taken, it has been recommended that to an adult a tablespoonful, and to children a dessert spoonful, should be given every five or ten minutes, until relief from the urgent symptoms is obtained.

FERRI NITRAS (*Nitrate of Iron*).—This preparation greatly resembles solution of chloride of Iron in its medicinal properties. It is held that to its astringent power it unites that of diminishing the irritability and tenderness of the mucous membranes with which it comes in contact. It has proved of great value in chronic diarrhea, but is not applicable where ulceration of the bowels is present. In diarrhea and other affections of the mucous membranes accompanied by discharges; in chronic diarrhea, depending mainly on an excess of sensibility of the organic nerves which supply the digestive tube; in leucorrhea, occurring in such as are pale, exsanguious, feeble and languid; in cases of aphthous sores; in the diarrhea and intestinal hemorrhage of typhoid fever; in urticaria, and in the treatment of intermittent fever, it has been used by various physicians, and its efficacy is attested to with great confidence.

It is, doubtless, a powerful astringent, but it is questionable

whether it possesses any advantage over the tincture of the chloride of Iron.

FERRI CARBURETUM (*Carburet of Iron, Graphite*).—This well-known substance was formerly considered to be slightly astringent and desiccative; but although it has been received into the various Pharmacopœias of continental Europe, it has never been recognized as a therapeutical agent in this country or in Great Britain.

According to Weinhold, the internal use of graphite produces no perceptible change on the organic functions, except that, under its protracted use, the urinary secretion is augmented, and a disposition to micturition excited. He found, however, that in herpetic and other cutaneous affections it occasioned a very favorable modification in the eruption, and wholly removed it. He employed it as well internally as externally. The urine, he asserts, after its administration, commonly began to make a deposit, and this continued until some change in the cutaneous affection announced its approaching cure.

Internally, graphite is given in doses of from five to fifteen grains, from two to four times daily, and the dose may be augmented, according to circumstances, to a drachm in the day. It is given in powder or in the pillular form. Externally, it is applied in the form of ointment or plaster—from ʒ ii. to ʒ vi. of the graphite to an ounce of the constituent.

POWDER OF CARBURET OF IRON.

R.—Carburet of Iron,
White Sugar, - - - - - aa. ʒ ss. M.

Divide into six equal parts. Dose: one every two hours, in lichen leproides.—*Von Hildenbrand.*

ELECTUARY OF CARBURET OF IRON.

R.—Ferri Carburet, - - - - - ʒ ss.
Mellio Despumat., - - - - - ʒ ii. M.

Dose: a coffee-spoonful, morning and evening.—*Weinhold.*

PILLS OF CARBURET OF IRON.

R.—Ferri Carburet.,
Ext. Dulcamar., - - - - - aa. ʒj. M.

Make sixty pills. Dose: six, three times a day.—*Markez.*

OINTMENT OF CARBURET OF IRON.

R.—Carburet of Iron,	- - - - -	3 ii.	
Oxide of Zinc,	- - - - -	3 ss.	
Lard,	- - - - -	3 j.	M.

[Mayer.

R.—Carburet of Iron,		
Sulphur,	- - - - -	aa. 3 ii.
Lard (to make ointment),	- - - - -	q. s.

[Brera.

A r n i c a .

(ARNICA MONTANA—LEOPARD'S BANE.)

ARNICA is a hardy, perennial herbaceous plant, a native of the northern parts of the Continent of Europe and of Siberia. If it possesses any peculiar habitude, it is the selection of shady situations in meadows and mountainous places, from the sea-shore to the limits of eternal snow. It flowers in June or July. The leaves have a pleasant aromatic odor, and excite sneezing; their taste is somewhat aromatic, bitter and pungent. The root is bitter and acrid. The flowers have a peculiar smell and a penetrating acrid, bitter, and somewhat nauseous taste. The flowers only are officinal in medicine, although the roots and other parts are possessed of medicinal properties.

Both the root and flowers contain a volatile oil, which is said to exist most abundantly in the root, while both contain *arnicin* in about equal proportion.

According to the analysis of MM. Chevallier and Lassaigne, the flowers contain a *resin*, having the odor of the flowers; a bitter, nauseous matter, resembling *cytisine*; gallic acid, yellow coloring matter, albumen, gum, muriate of potassa, phosphate of potassa, a trace of sulphur, carbonate of lime, and a trace of silex.

Arnica is known to have been employed in Europe as early as the sixteenth century. It was first mentioned by Tabernæmontanus, one of the most eminent botanists of the sixteenth century. He states that it was a popular remedy among the Saxons for bruises and other injuries with extravasation of blood, and for the cure of obstinate intermittents, rheumatic pleurisy, and other

affections in which pure stimulants are commonly employed. The publication of the work of Collin, in 1778, attracted much attention to its use, particularly among the German physicians. He employed it successfully in paralysis, amaurosis, putrid or typhoid affections, and in diarrhoea of phthisis. In England and France it is quite extensively employed at present; in the United States its use is increasing, and the confidence reposed in it by the practitioners of Germany, and the strong expressions in its favor by the most enlightened medical authorities of that country, entitle it to a thorough trial, even though their praises may be considered extravagant.

The reason why it has not been used more by American practitioners may be the inferiority of the article employed—that used here having deteriorated by age, while that employed in Germany is fresh. This, however, to a great extent, may be overcome by comparison of the German preparation with that made here from the imported flowers; a careful analysis of both, and the importation of fresh flowers from the places of their growth. These precautions will produce a preparation in which little or no difference will be observable.

Many efforts have been made to procure the seed of the *Arnica Montana*, with a view to its cultivation here, but as yet without success. The presence in this country of the species, *arnica chamissonis*, found by Dr. Newberry, botanist of the Pacific Railroad survey, on the shores of Klamath Lake, Oregon Territory, and the *arnica mollis*, at Crater Pass, near the snow line, gave rise to a belief that the *Arnica Montana* was indigenous to that country, which is not the case. The latter variety has been found in moist places on the White Mountains of New Hampshire, and on mountains of New York near the sources of the Hudson River.

The local action of *arnica* is that of an irritant. Taken internally it occasions a sense of irritation and burning of the throat, nausea, sometimes vomiting, gastric pains, and loss of appetite. The active principle, taken into the system, augments the heart's action, quickens the respiration, and promotes diaphoresis and diuresis. It appears to increase the bronchial secretion also, and occasions headache, giddiness, &c. If the dose be large, or an overdose, all of the functions are quickened, but dullness and a

sense of weariness ensue; sometimes the brain and spinal marrow are peculiarly affected, twitchings and involuntary motions of the extremities generally preceding other effects on the nervous system. These effects generally pass off soon, without leaving any derangement of the system, provided the dose be not too large.

Dr. Wood, in an essay upon Arnica, says:—"Perhaps the most useful practical application of the medicine is the treatment of the different forms of fever in which the typhoid condition exhibits itself. When, in these complaints, the patient falls into a state of mental indifference or prostration, with diminished sensibility and a disposition to sleep; when the pulse is soft and feeble, the vision dull, the eyes turbid, the teeth, lips and tongue encrusted with sordes, the skin bathed in a cold, clammy sweat, or marked with petechiæ; in fine, when the evidences are presented of a general failure of the vital powers, Arnica is habitually resorted to, and, as is asserted, with the effect of supporting the energies of the system and favoring the resolution of the disease. It is, however, almost always, in such cases, given in combination with the diffusible stimulants or antispasmodics, such as valerian, camphor, musk, ether, &c." Voigtell used the root in typhus fever, and in some cases prefers it to the flowers. He considers this remedy peculiarly applicable to cases of great sluggishness of the abdominal viscera, indicated by tympanitic swellings, looseness of the bowels, fetid discharges of air, eructations of air, and a sense of weight and abdominal distention. In connection with its use he applies spirituous embrocations or spice poultices to the abdomen, volatile stimulants internally, and Peruvian bark.

Stoll gave it in "putrid fevers," when there was no inflammatory complication and the pulse was natural, while the strength and all the animal functions were much depressed; also when the tongue was dry or covered with an abundant and foul mucous, or when the patient was dull, sluggish and deaf, with muttering delirium, he generally preceded it with an emetic. It usually gave rise to flatulence and colic, but lessened the stupor and, in most cases, excited nausea. Its similiar use is confirmed by Collin and Hildebrandt. Stoll also particularly recommended it in symptomatic and colliquative diarrhoea of low forms of fevers, and is stated to have cured patients reduced to the last extremity

by hectic fever, colliquative sweats and diarrhoea, from suppuration, and who had previously taken large doses of bark in vain; so that he remarked: "With its aid I did not despair when all seemed desperate." According to Dr. Stillé, "Stoll vaunted this remedy in certain intermittent fevers, which he used in the form of an electuary. It generally produced severe pains in the stomach, with a copious, viscid perspiration, a full, slow pulse, and constipation of the bowels. He allayed gastric symptoms with opium. This method, he states, transformed triple into double quartans, and these into simple quartans, which disappeared without relapse. In the epidemic and typhoid form of *dysentery*, he declared he knew of no remedy more justly entitled to be called a specific."

At another time I will speak of it, as employed by Richter and others, and of the preparations of it. A.

Atropia in Incontinence of Urine.

By A. F. PATTEE, M. D., of West Amesbury, Mass.

AFTER observing the effects of belladonna in incontinence of urine, so highly spoken of by many writers in different medical journals, the writer was induced to try the alkaloid principle, Atropia, knowing that the effects produced upon the system are exactly those of belladonna, only that they are relatively more powerful, while the extract and tincture often require a much increased dose, and often fail to produce the desired effect.

The dose can be more easily managed, and danger from poison avoided. It can be given in solution, with but little observable taste, which is of much advantage when given to children.

Before giving the Atropia, attention should be given to the alimentary canal—correcting all irregularities, so far as possible. We often find some tenderness of the spinous processes of the dorsal and lumbar vertebræ, which should be rubbed twice daily with some stimulating liniment. The diet should be plain and unstimulating; water or slippery-elm bark tea for drink.

I have prescribed the Atropia in thirty cases, four of which were of long standing, and had been under treatment for a long

time, a diversity of remedies having been used. All were completely cured, in a period of from six to fifty days.

The one-fortieth of a grain was given, three times a day, to adults, in solution, until the usual symptoms of belladonna is produced—that is, dilatation of the pupils and dryness of the fauces. The solution can be made as follows:—

R.—Atropia, - - - - -	gr. i.	
Aqua Destill., - - - - -	℥ v.	
Acetic Acid, - - - - -	gtt. vi.	M.

Dose: one drachm, three times a day—morning, noon and night—increasing or decreasing as occasion may require. For children, the dose must be graduated in proportion to their ages.

Pepper.

(PIPER NIGRUM.)

PIPER NIGRUM is a perennial plant, a native of the East Indies, and is much cultivated in Malabar, Java, Borneo, Sumatra, and the Philippine Islands, whence the whole of Europe is supplied. It grows in the greatest abundance in the province of Malabar, and constitutes one of their principal articles of export. One thousand plants yield five hundred to one thousand pounds of Pepper. The plant begins to bear about the third year, and is esteemed in its prime about the seventh, which state it maintains three or four years; it then gradually declines for about the same period. The vines generally yield two crops annually—the first in December, the second in July. As soon as the berries redden the bunch is considered fit for gathering. When gathered, they are spread on mats in the sun. In this situation they become black and shrivelled, and, as the Pepper dries, the grain is separated from the stalk.

Pareira states that three kinds of black Pepper are distinguished by dealers. Malabar is the most valuable; *Penang* is larger and smoother, and used for the manufacture of white Pepper; and Sumatra is the cheapest sort. Fulton's decorticated Pepper is black Pepper deprived of its husk by mechanical trituration.

A variety known as bleached Pepper, or English bleached Pepper, is Penang Pepper bleached by chlorine, by which pro-

cess undoubtedly a portion of the active properties of the berry is lost.

Black Pepper is subject to great adulterations in the ground state. According to Hassall, out of forty-three samples examined in 1851, nearly one-half were found to be adulterated. The substances were found to be *linseed meal*, *mustard husk*, *wheat flour*, *pea flour*, sage, rice flour, pepper dust, ground gypsum, or crystallized sulphate of lime. Before the Committee upon Adulterations, the Commissioner of Excise stated that in twelve years he had examined 1,116 samples, of which 576 were adulterated. The stock material for adulterating Pepper is the husks of red and white mustard seeds, and linseed meal warmed up with Oilis-

Some years since it was not uncommon to meet with artificial Pepper corns. Accum writes:—"I have examined large packages of both white and black Pepper, by order of the Excise, and have found them to contain about sixteen per cent of an artificial compound, composed of oil cake, the residue of linseed from which the oil has been pressed, common clay, and a portion of Cayenne Pepper, formed into a mass, and granulated by being pressed through a sieve and then rolled in a sack." All suspected Pepper should be soaked in water. Should it contain artificial Pepper corns they will become disintegrated and fall to pieces.

The active properties of Pepper depend upon the presence of an *acid resin*, a volatile oil, and a crystallizable substance called *piperine*. As analyzed by Pelletier, it contains—1st. Piperine; 2d. Green, concrete, very acrid oil; 3d. Thick volatile oil; 4th. Colored gummy matter; 5th. Extractive; 6th. Malic and tartaric acids; 7th. Bassorin; 8th. Earthy and alkaline salts; 9th. Woody fibre.

The *resin of Pepper* is a very acrid substance, soluble in alcohol and ether, but not in the volatile oils. It possesses, in high perfection, the acrid properties of the Pepper, and has been employed in intermittents with success. The volatile oil, when pure, is colorless; it has the odor and taste of Pepper; it absorbs hydrochloric acid in large quantity, but does not form a crystalline compound with it. According to Meli, it possesses the same febrifuge properties as piperine.

Piperine was discovered by CErsted in 1819, but was more accurately examined by Pelletier in 1821, and later by Dr. Christi-

son. It is obtained by treating Pepper with alcohol, evaporating the tincture to the consistence of an extract, submitting the extract to the action of an alkaline solution by which the oleaginous matter is converted into soap, washing the undissolved portion with cold water, separating the liquor by filtration, treating with alcohol, and allowing the solution thus obtained to evaporate spontaneously or by gentle heat. Crystals of *piperine* are deposited, and may be further purified by alternate solution in alcohol and ether, and crystallization.

Pepper was very anciently used as a medicine. The notions of the ancients concerning it are mentioned by Pliny and Celsus; the latter classes it among his diuretica. The native doctors of India prescribe it in cases of cholera morbus, and Dr. Ainslie says he has known it to stop vomiting when other means failed. Theophrastus, in speaking of several species, mentions their oleo-facient operation, and that they are antidotes to hemlock. Dioscorides mentions the Indian origin of Pepper, and enumerates the various medicinal purposes for which they were employed, most of which appear to have been confirmed by physicians of a later age. Ettmüller, Bartholin, Ernestus, Kunrad and Schroder, in the last century, employed it in the cure of intermittent fevers.

Applied to the skin, Pepper acts as a rubefacient and vesicant; its action is rather that of a local stimulant. According to Dr. Stillé, "it stimulates the feeble digestion, and enables the stomach to appropriate food which, without its aid, would not be assimilated, and, at the same time, prevents the formation of flatus, or provokes its discharge;" but, if given in large quantities, induces an inflammatory condition. According to Pareira, on the vascular and secerning systems Pepper acts as a stimulant. It accelerates the frequency of the pulse, promotes diaphoresis, and acts as an excitant to the mucous surfaces. It has long been regarded as a stimulant for the urino-genital apparatus, with well-marked influence over certain morbid conditions of those organs. According to Riecke, the antiperiodic virtue of Pepper is exhibited upon the healthy economy—a few Pepper corns, taken before the expected appearance of the menses, arrests them for several days. Of this, he is not stated to have had much experience, but affirms that the females in Southern Germany have great confidence in their virtues.

Infused in spirit, it was a popular remedy for preventing the return of the paroxysms of intermittent fevers, given shortly before the expected attack. In 1816, Louis Frank, after having in vain endeavored to cure tertian ague with bark, and afterwards with opium, prescribed six Pepper corns, to be taken twice a day, and afterwards increased to nine. A cure was speedily effected. Afterwards, he treated seventy persons, and in a majority of cases the disease was arrested after the second or third paroxysm. The cases of relapse were rare—more so than when bark was used. Its employment and success suggested the use of piperine, which was exhibited chiefly by Italian physicians for intermittent fevers. In 1824, Miccoli, of Ravenna; Bertini, of Turin; Simonetti, of Pesaro, and Gordini, of Leghorn, used *piperine*, successfully, in a large number of cases. From the cases treated, Dr. Gordini infers that the piperine will cure fevers that resist sulphate of quinine, and that it will prevent a relapse better than the latter remedy. Riedmuller, of Nuremburgh, is reported to have treated five hundred cases very successfully with this remedy.

According to Dr. Meli, it has the same febrifuge properties as the alkalies of the cinchonas. At the hospital of Ravenna, he cured a great number of cases of intermittent fever by it, and goes so far as to affirm that its action is more certain and more prompt than quinia.

The febrifuge virtue of *piperine* has been confirmed by many other Italian physicians. Bertini gave it, in three-grain doses, during the apyrexia, to the extent of a scruple, made into pills, with a bitter extract. After two or three doses the fever was generally arrested. Gordini affirms that relapses occur less frequently after the use of piperine than after the use of sulphate of quinine. Its employment by others than Italian physicians appears to have confirmed their reports of its properties. Dr. Hartle, of Trinidad, states, in the *Edinburgh Medical and Surgical Journal*, that in the intermittents of that island he found piperine to eradicate the disease when quinia failed. He prescribed it as soon as the sweating stage was established, until eighteen grains had been taken, and on the following day, when intermission was complete, he directed the same quantity every three hours. It succeeded in every case in checking the paroxysm, and as soon as this was accomplished he gave, for some days, pills composed of pilule hy-

drargyri, 1 grain; piperine, 2 grains; sulphate of quinine, 2 grains; syrup, q. s. One to be taken morning, noon, and night. Dr. Hartle remarks that a number of patients object to taking sulphate of quinine, in consequence of its affecting the head; but piperine, although a powerful stimulant, carminative and febrifuge, does not in the least degree affect the sensorium.

Dr. Bloom, of Utrecht, has given it in intermittents, but not with the same success as quinia. He is of the opinion, "that both in general debility and in debility of the digestive apparatus piperine merits a preference over sulphate of quinia, both because it can be better borne by the stomach and because it acts more tonically upon it, and is particularly applicable in cases which resist quinia, or which frequently relapse in spite of the use of this medicine."

Dr. Rose, of Philadelphia, employed it in twenty cases of intermittent and remittent fevers with success, and also in "cases of low, nervous fever, or typhus." When he wishes a stimulating diaphoretic, no remedy is preferable for that purpose to piperine—not even volatile alkali. In this form of the disease, when the animal powers are about to yield to the influence of the disease, and the patient fall a victim to the timidity of the practitioner, he has boldly withheld all other remedies and administered the piperine, in doses of two grains every two hours, until eight or ten grains had been taken. The low, muttering delirium began to subside, the skin became moist, and the patient, sensible of his improvement, expressed himself better. Repeated the same doses the following day, and for three, four, or five days, when he found no fever; strength increased, and the patient, with an inclination for food, became convalescent.

Carpenter, on piperine, mentions several cases by Dr. J. C. Roseau, of Philadelphia, in which it was used with much satisfaction. In the case of a person about forty years it produced a radical cure, in the dose of three grains, in twenty-four hours; continued for several days. A peculiar feature of the case was, that the patient had taken quinine for some days, in doses of thirty grains every twenty-four hours, and that during the use of it he was under a most violent and painful state of excitement.

Dr. Black also mentions a case of severe quotidian fever, attended with rejections from the stomach and a violent pain and great

determination of blood to the head during the hot stage, with cold feet and delirium. On the day of intermission quinine was administered, which was often rejected by the patient. Nausea and headache was increased. Piperine was substituted, in doses of one grain every hour, to the number of ten a day. The paroxysms ceased, and the patient was cured in a few days.

I have given, as briefly as possible, the principal reports which have been published concerning its use, having observed very good results from the use both of the fluid extract of black Pepper and *piperine*. It is an article which should not be overlooked in the list of antiperiodic remedies, as there is abundant evidence of its value in intermittent fevers. Dr. Stillé says:—"Probably its real value consists in its stimulant operation; and in that it is particularly applicable, on the one hand, to very mild cases of the disease, and, on the other, to those chronic forms which are often sustained by want of tone in the system generally, and by debility of the digestive organs in particular. Under circumstances like those referred to, the association of black Pepper with quinia or bark is probably more efficacious than the administration of either medicine alone."

There appears to exist some difference of opinion as to the full efficacy of the drug being exhibited in the piperine, an alcoholic extract being preferred. The resin was employed by Dr. Lucas in intermittents, with success; and the volatile oil possesses, according to Meli, the same febrifuge properties as piperine. Therefore, a preparation which contains the resin, volatile oil and piperine, ought to possess more efficacy than either one alone.

The fluid extract of black Pepper of the United States Pharmacopœia is prepared with ether; the *piperine* is separated, and is really an oleo-resinous extract. It differs but little from what is sold under the name of oil of black Pepper, consisting mostly of the volatile oil and resin of Pepper.

The fluid extract, recently prepared, which, I am informed, represents for every fluid ounce one ounce of the Pepper, is sufficiently strong for general use, and contains the three principles of the Pepper. The dose is from ten to thirty drops. The solid extract is very convenient as an excipient for administering quinine, and when not conveniently obtained the fluid can be evaporated in a short time so as to become pillular. I have also found the

fluid extremely convenient for making a cataplasm of mustard and ginger, moistening the mustard with it.

I have other formulæ, which I should like to present, but, having extended this article beyond my intention, I must omit them for the present. J.

From the London Pharmaceutical Journal, of December, 1859.

Cultivation of Medicinal Plants at Hitchin, Herts, England.

WILD OR SQUIRTING CUCUMBER.

Till within the last few years the cultivation of the wild or squirting cucumber (*Ecbalium officinarum* Rich., *Momordica elaterium* Linn.) was almost entirely confined to Mitcham, in Surrey, and Ampthill, in Bedfordshire. Its cultivation is, we believe, given up at the latter place, at least for commercial purposes; for, upon making inquiries there, we can obtain no information respecting it. At Hitchin, however, it is now cultivated to some extent by Mr. Ransom, pharmaceutical chemist, of that town. We may conclude, therefore, that Mitcham and Hitchin are at the present time the only districts in which it is grown for commercial purposes. Its cultivation at the former place has already been described in this journal (vol. x., p. 168); we propose now to allude to it at the latter.

At Hitchin, the plants are either raised from seeds or by division of the roots. When raised from seeds, these are sown in the spring, usually about the end of March or early in April; the seedlings are then allowed to remain in the ground where they have sprung up, the soil having been previously highly manured with stable manure. A large number of plants are always self-sown. (The practice thus adopted at Hitchin is, in some respects, different from that carried out at Mitcham, for here it is customary to sow the ground about March, and to plant out the seedlings about June.—*Pharm. Journal*, vol. x., p. 168.) When the plants are raised by dividing the roots, this operation is performed in the spring, the plants employed for the purpose having remained in the ground during the preceding winter, at which season they are protected from the frost by being covered with manure and mould. As it is found that the slightest frost destroys the plants, it is necessary to be very careful in thus protecting them from its influence. The plants thus raised by dividing the roots are afterwards planted out in ground highly manured, as in the plan of raising from seed. From the above facts, it is clear that the squirting cucumber, although an annual under the natural conditions, yet, by being protected during the winter, its existence may be prolonged beyond a year—indeed, we have seen plants which we have been informed were more than three years old. Hence, an annual plant thus be-

comes a perennial. Mr. Arthur, of Mitcham, has also observed "that if the roots be covered up during the winter, the plant survives through several seasons; and he has now some which have lived three or four years." The fruits which are borne by plants more than two years of age are, however, much smaller, and their yield of elaterium less than those of younger plants; hence it is not customary to grow plants for commercial purposes beyond the second year of their existence.

The plants grow most luxuriantly in a damp, loamy soil; but it is found that a too great development is unfavorable to the production of the fruit, which is the only serviceable portion of the plant, because in all cases where the nutritive organs of a plant become highly developed but little fruit is produced. Hence a moderately dry, loamy soil, which has been highly manured, is that best adapted for the growth of the squirting cucumber. We are informed that a hot, moderately rainy season is that in which the plants thrive best, and yield most elaterium.

The plants flower freely in July and August, and towards the end of the latter month and the first two or three months in September the fruits are gathered for the preparation of elaterium. It is necessary to gather the cucumbers as nearly ripe as possible, for otherwise they will yield but a very trifling amount of the best elaterium; but, in consequence of their being thus collected in a comparatively ripe condition, the produce of many is lost, from the peculiar and well-known tendency of the fruit to discharge its contents when but slightly touched as it approaches ripeness. The common name of squirting cucumber, as applied to this plant, is thus derived. This loss of the juice in the fields during the process of gathering the cucumbers much increases the cost of obtaining and preparing elaterium. It is customary to employ boys to gather the cucumbers, and they are obliged to be very careful in handling the plants for the purpose of doing so, as otherwise the fruit frequently discharges its contents—and if this should reach the eye or other sensitive parts serious consequences might ensue from the irritation thus occasioned. To show the injurious effects that sometimes result from carelessness in handling the fruits, it may be stated that, about two years since, some of the boys employed in gathering them began to play, and whilst doing so one of them squirted the juice into another's eye, and the inflammation excited thereby was so great that the sight was for some time almost lost; in fact, it was more than a twelvemonth before it was entirely restored.

All the cucumbers produced at Hitchin are employed there for the preparation of elaterium. The process adopted (at least so far as can be ascertained by us, for there are certain peculiarities, connected with the mode of collecting and manipulating the elaterium which are kept secret,) is as follows:—As the cucumbers are brought in from the field, they are at once washed to free them from adhering dirt and other foreign matters. This process of washing is, we are informed, always resorted to, but it becomes more necessary when the fruits are very dirty. Each cucumber is then cut lengthwise, so as to divide it into halves. This operation is usually performed by boys; and as the fruit

is thus cut the halves are received into glazed earthenware pans. The divided cucumbers are then placed as soon as possible in a hempen cloth, and the whole afterwards placed in a common screw-press. A moderate pressure is now employed to press out the contained juice, which is allowed to run into a glazed earthenware vessel, placed ready for the purpose, and at the top of which a sieve is put, so that the expressed juice is strained as it runs from the press, and thus before any deposit can have taken place, which we regard as a very desirable mode of procedure. Mr. Ransom informs us that he is very careful not to have much pressure exerted, for otherwise the elaterium is much deteriorated in quality; and as we have had an opportunity of seeing the cucumbers after having been submitted to pressure, we observed that they were but moderately crushed, and hence the pressure employed could not have been very great, or they would have been reduced to a more pulpy condition. The juice, as it runs through the sieve, is somewhat turbid, and of a greenish-yellow color. When the pressure has been continued for a few minutes, and the juice all run out from the pressed cucumbers, it is poured into glazed earthenware jars, and allowed to stand for about twelve hours, by which time the whole of the elaterium will have been deposited in the form of a greenish, slightly yellow mass. (The time thus allowed for the deposition of the elaterium is much longer than that commonly adopted; thus, at Apothecaries' Hall about two hours are considered sufficient for the purpose, and at Mitcham the time allowed varies usually from three to four hours.) The supernatant liquor is then very carefully removed, and a deposit collected in a cloth. This deposit is then dried in a room heated by steam to a temperature of about 100° Fahrenheit, and the preparation of the elaterium is completed. The exact mode in which the supernatant liquor is removed, and the deposit collected and dried, is a secret. In some places where elaterium is prepared it is the custom to put aside the supernatant liquor and allow it to deposit again. The elaterium thus obtained is of a paler color and inferior in strength to the former. No use is, however, made at Hitchin of this supernatant liquor, but it is thrown away after the first deposit has been obtained. In fact, the time allowed for the first deposition is so long, that it is not likely that any further deposit would take place.

The amount of elaterium obtained from a bushel, or forty pounds of cucumbers, is about three drachms. This accords very nearly with the experience of others. Thus Mr. Arthur, of Mitcham, states that one bushel of fruit will yield about half an ounce, and Dr. Clutterbuck says that he obtained from half a bushel "less than two drachms of elaterium." We may fairly conclude, therefore, that half an ounce of good elaterium per bushel is about the ordinary yield, and that if a larger quantity be obtained, as is sometimes the case, that the excess is probably due to the use of too much pressure, and the resulting elaterium of inferior quality. We are informed, however, that the quantity of elaterium that can be obtained varies somewhat according to the weather in which the fruit is collected; thus, when the cucumbers are gathered in wet, cool days, the yield is less than when they are obtained

on a hot, dry day.

The elaterium thus prepared at Hitchin is all sold to the wholesale druggists. We believe that much of the elaterium prepared in this country is not used here, but that a great proportion is exported to America and the Continent, where it is much more frequently employed as a medicinal agent. We think it probable that elaterium would be much more employed as a medicine in this country could it be always obtained of uniform strength; but on account of the various modes employed for preparing it, and the adulterations to which it is liable, this is far from being the case; and with such a powerful medicinal substance as it undoubtedly is, such a want of uniformity frequently leads to serious consequences. We consider it, therefore, very desirable to publish the processes of those who prepare good elaterium.

The elaterium, as thus prepared, is of a pale green color, with a slight yellowish tinge, which becomes more apparent by keeping. It is in light, thin, slightly-curved pieces, which breaks readily, and with a short fracture. It is readily reduced to powder when rubbed between the thumb and forefinger, thus proving the absence of any mucilaginous matter. It has a somewhat fragrant and agreeable odor, which is quite of a peculiar nature, for it does not recall any other substance to us, although by some writers on *materia medica* the odor of elaterium has been compared to that of ergot of rye combined with the fragrance of senna or tea.

Use of Chloroform and Aconite in Neuralgia.

In a letter to the *Medical Times and Gazette*, Dr. Gueneau de Mussy writes:—

“For more than three years I have prescribed it in neuralgia of different regions; but here I want chiefly to allude to the most common and severe of neuralgic pains—the facial neuralgia—in which I have derived from the above-named remedy sometimes a complete and permanent cure, and always an almost immediate and considerable relief. In such cases I apply it directly to the gums of the side affected, where numerous divisions of the fifth nerve are most superficial. When the neuralgia is idiopathic—*i. e.*, unconnected apparently with any other disease—the formula is:—Two parts of spirit of wine or eau-de-cologne, one of chloroform, and one of tincture of aconite. The finger, covered with a piece of lint or soft thick linen, is dipped in the mixture and rubbed gently against the gum for a few minutes. I do not use a sponge, because it would take up too much of the liquid, which, by pressure, might drop into the mouth.

“When the pain is connected with some organic disease, as a deranged tooth, chronic inflammation of the gums or of the sockets, or, as I have observed, superficial necrosis of the bone, I have found the tincture of iodine a very beneficial substitute for spirit of wine in the formula above.

"The infra-orbitary branch being the most commonly affected, it is chiefly in neuralgia in this part the application has been successful; but by no means exclusively so—it answers very well in pain of the lower branch; and I have observed some very severe cases of supra-orbitary neuralgia, in which the same application has been attended with an equally satisfactory result.

"This shows, moreover, that the sedative agent may produce its effect, as the irritating one so frequently does, on a part distant from the spot on which it was applied in the same, and even in a different branch of a nerve."—*Chicago Medical Journal*.

Belladonna in Scarlet Fever and in Profuse Lactation.

Dr. J. W. Benson, Professor of Anatomy in the University of Louisville, says:—

"In twenty-five successive cases of this disease, which have been latterly under my professional care, the treatment consisted in inunction of the parotid and submaxillary regions, by an unguent composed of fifteen grains of the extract of belladonna to an ounce of simple ointment. This was applied freely and frequently, as soon as the patient complained of sore throat. A piece of flannel was afterwards applied, and in no case was any other treatment adopted, except the administration of small quantities of neutral mixture during the day. In some cases of rapidly occurring tumefaction of the throat, the prompt subsidence thereof, under the treatment, left no room for doubt as to its efficacy. I do not pretend to offer this mode of treatment either as a cure for scarlet fever or as the sole means to be relied upon in any case, but I do claim for it a controlling power over the engorgement, and hence a prevention of those destructive ulcerations of the throat which are so much and so justly dreaded. In some cases it has seemed to have a salutary effect upon existing diarrhoea, as soon as the system was influenced by the remedy.

"In one case only was I compelled to discontinue its use because of its constitutional effect. I will not here discuss its *modus operandi*, but simply suggest that the experiments of physiologists in reference to the influence of the organic nerves upon glandular organs, coupled with an experience of thirteen years in its use as a restraining remedy in salivation, and a more limited but somewhat extensive observation of its influence on the mammary gland, seemed to justify, on purely rational and philosophical grounds, the adoption of the course pursued.

"During a discussion, some months ago, in the College of Physicians and Surgeons, upon the merits of belladonna treatment in profuse lactation and mammary inflammation, I took the liberty of intimating that, perhaps, the contradictory results of the observation of members might have obtained from a failure to distinguish between the pathological condition of the gland

itself and that of the areolar structure in relation with it, for, if my views of its action be correct, it might not influence directly the latter condition, but would prove potent in the former. Since the results of the application, as indicated, were reported to the College, some of my friends have adopted the same course, and with the same results, viz: perfect success in every case.

"They, therefore, concur with me in attributing such results to something else than mere coincidences or negative effects. They may not be, but the application is a simple and, under judicious watchfulness, a harmless one; and I will be as free to confess its inertness, as I am now anxious to press its claims to attention, so soon as my duty shall seem to indicate such a course."—*Louisville Monthly Medical News.*

Selections.

SEVERE HÆMORRHAGE FROM THE TONSIL ARRESTED BY THE SOLUTION OF PERCHLORIDE OF IRON.—Dr. Thompson applied it to the opening from which the blood was issuing, by binding a piece of lint around the entire forefinger, so as to form a mop. Pressure was kept upon the wound until he could apply the solution, which was done freely two or three times. The bleeding was at once arrested. Similar treatment upon its recurrence was permanently successful. In default of its success, Dr. T. had determined to tie the carotid artery.—*London Lancet.*

ULCERATED HOUSEMAID'S KNEE.—This female presented an inflamed and ulcerated bursa of the knee, which had undergone scrofulous degeneration. The base or stool of this chronic ulcer, as the encircling rim of unhealthy plastic matter was called by Sir Charles Bell, was hard and thickened. Two ordinary scrofulous ulcers of smaller size were seen on the inner side of the joint. Dr. Pancoast remarked that an ulcer in this condition often refused to heal, when it would readily do so if the hard circular rim were divided. In many cases of ulcers of a specific kind he often destroyed the rounded form of the base by incisions into it, and sometimes by the removal of a V shaped piece, with very good effect. In this case he divided the edges through to the outer healthy structure, in three different positions, not deeply, lest he should involve the involucre of the knee joint. A corn meal and yeast poultice was ordered to be applied, renewed every six hours, and the following tonic and alterative pill directed to be taken, twenty minutes after each meal:—Potassii bromide, grs. iij.; ext. ignatiæ amar., piperin, aa. gr. ½; ferri carb., gr. i. Mix. After twenty-four hours' poulticing, the following ointment was directed to be used:—Hydrarg. oxyd. rubr., ʒj.; cerat. plumbi. subacet., 3ss.; vini opii, f. ʒj. Mix. Lotions of lead water and laudanum were also prescribed, to be applied over the ointment with patent lint covered with oiled silk, retained by a few turns of a bandage.—*Medical and Surgical Reporter.*

REMITTENT FEVER IN ST. LOUIS.—The Medical Society of St. Louis (reported in the *St. Louis Medical and Surgical Journal* for November,) state that the several forms of malarial fever have been unusually abundant in that city the past season. At the O'Fallon Dispensary, 138 cases were prescribed for in a single afternoon. The type seem protean. Quinia and calomel were found as useful as ever, and largely relied upon. Dr. Boisliniere suggested dry cupping over the epigastrium, as very useful in allaying irritation and vomiting. Dr. Pallen recommended mixing the quinia with champagne, to quiet the stomach and prevent vomiting. He has found this practice very useful in many cases.—*Chicago Medical Journal*.

[Have the physicians of St. Louis tried piperine, or other preparations of piper nigrum, as suggested by Dr. Hartle, of the West Indies, in similar cases, where irritation and vomiting existed.]

DIPHTHERITE.—Prof. Alonzo Clark, in an able and interesting lecture upon this subject, in the College of Physicians and Surgeons of New York, published in the *Philadelphia Medical and Surgical Reporter*, of Feb. 11, concludes as follows:—1st. That inasmuch as diphtheria is a manifestly constitutional disease, so must our main reliance be placed on constitutional treatment. 2d. As the disease is of an *asthenic* type, the remedies employed must be such as will give tone to the system. The best of these are the fluid preparations of iron, quinine, &c., together with an invigorating diet and the occasional use of stimulants. 3d. The administration of mercury, with a view of obtaining its constitutional effects, is a doubtful expedient, but the application of dry calomel to the ulcerations of the throat is of decided benefit. 4th. The application of the nitrate of silver to the membrane itself is of no special service, whereas if applied to the parts immediately around the membrane it tends to prevent its further extension. 5th. The administration of chlorate of potash, both in the form of a gargle and as an internal remedy, though not, as was claimed, a specific in this disease, is still of some benefit, and should therefore form a part of our treatment.

OPIMUM IN POISONING BY STRAMONIUM, ETC.—Dr. T. L. Maddin, in the *Nashville Medical Record*, reports a case of poisoning by the seeds of datura stramonium successfully treated by laudanum. Removal of such portions of the poison as remained in the intestinal canal, being first provided for by emesis and catharsis. The controlling power of the opiate over the constitutional disorders was distinct. Dr. M. urges the opium as a counter poison also to belladonna, and similarly acting agents, considering "the pupil in all cases as a reliable index as to how far with safety we may proceed in its use." The constitutional effects of the opiates he deems likely to be relieved by belladonna, &c., under similar physiological reasons.—*Chicago Med. Journal*.

TREATMENT OF SCARLATINA BY IODINE.—W. Reeves, M. R. C. S., in the *London Lancet*, recommends in all cases of scarlatina, as soon as diagnosed:—Potassii iodid., 3i.; iodine, gr. ii.; potassæ chlorat., 3i.; potassæ

nitrat., 3 iss.; aquæ, ʒ viii. Mix. From a teaspoonful to a tablespoonful every four hours, according to the age of the patient. He adds to this, local application of the iodine to the throat, internally, by means of a feather, and externally in the form of ointment over the glands. He claims that "there are no other remedies in this disease at all to compare with iodine, thus employed."—*Chicago Medical Journal*.

IODIDE OF AMMONIA IN SYPHILIS.—As the result of several trials made by M. Gamberini, of Bologna, it is stated—1. That it is suitable in all cases in which iodide of potassium and sodium are employed. 2. It leads to a rapid cure. 3. The quantity given daily may be carried as high as from half drachm to half ounce, and intolerance is rarely exhibited. 4. Employed in friction with olive oil, it causes the disappearance of nocturnal syphilitic pains. 5. The signs of intolerance are a sense of burning in the throat and heat of the stomach; these rapidly disappearing on the suspension of the medicine for a couple of days. 6. Under the internal use of this medicine indurations consecutive to hard chancre disappear, as do also the indurated ganglionic pleiades in the groin. 7. Arthralgia, rheumatoid affections, periostitis, enlarged glands, and papulo-vesicular syphilide of the back, are the forms of syphilis which have best yielded to this drug.—*Bull. de Thérap.*

TREATMENT OF OBESITY.—Mr. Duchesne Duparc read a short paper on the use of *fucus vesiculosus* for the treatment of obesity. Having tried this plant for the cure of inveterate psoriasis, the author came to the conclusion that its reputation for the removal of that disease was much superior to its real value; but that in another respect the drug produced an unexpected result, *fucus vesiculosus* inducing rapid loss of flesh, without discomfort or disturbance of the digestive functions. Mr. Duchesne related several cases, whence it appears that in persons affected with premature or excessive obesity, the weight of the body may be much reduced by the use of the leaves and stems of *fucus vesiculosus*, in decoction, powder, or pills.—*Championnière's Journal*.

VALERIAN IN DIABETES.—Rouyer and Trousseau first discovered the beneficial effect of large doses of the root of valerian in diabetes, even thirty grammes per day. Trousseau corroborates (*Gaz. des Hôp.*, 113, 1858,) their statements by a case treated by him in the same way. The patient had been, for a considerable time, subject to different courses of treatment, embracing nearly every remedy known to have ever proved successful, without any relief; the only noticeable benefit appearing as long as he took, besides other remedies, ten grammes of the powdered root of valerian minor. The disease had lasted thus four years, when Trousseau prescribed first ten, then twenty and thirty grammes of the extract of valerian, with the most astonishing result: the quantity of urine decreased steadily, and in twenty-six days the patient could be dismissed, the urine voided during a day surpassing the quantity of fluids taken by only one litre.—*Cleveland Medical Gazette*.

P h a r m a c y .

FLUID EXTRACT OF CHAMOMILE.

The use of chamomile, not only as an agent to improve the digestive functions when disordered by disease, as an antiperiodic, and as a general tonic, but as an agent for preventing suppurations in phlegmonous erysipelas, in phthisis, and, in fact, every case in which it is desired to prevent too abundant suppuration, suggested a concentrated preparation of it, in the form of a fluid extract.

Take of fresh chamomile flowers, 1 pound,
Alcohol of sp. gr. 871°, q. s.

Moisten the chamomile, in coarse powder, with the alcohol, then pack in a percolator, and cover with the alcohol; digest six days, and draw off twelve ounces, which set aside. Continue the displacement with diluted alcohol, until it is freely exhausted of its bitterness, which evaporate in a vacuum to four fluid ounces. Mix and filter. One drachm of this preparation represents sixty grains of chamomile flowers, which is usually given in doses of twenty grains, as a tonic, to one drachm, as an antiperiodic—making the dose for like cases from twenty minims to one fluid drachm.

SYRUP OF CHAMOMILE.

Take of fluid extract of chamomile, 4 ounces,
Syrup, 12 “

Mix, with syrup moderately warm, and strain through flannel. The preparation is as clear as that made from the flowers, with the convenience of being made at will. The dose is one-fourth that of the fluid extract, or from two to four drachms.

FLUID EXTRACT OF LEPTANDRA.

Take of Leptandra root, in coarse powder, 1 pound,
Alcohol of sp. gr. 871°, q. s.

Moisten the powdered root with alcohol, and allow it to stand twelve hours; then pack it in a percolator, and pour on alcohol until the material is fully covered. Allow it to digest for forty-eight hours; then displace gradually, returning to the displacer the first runnings, until what passes is clear, adding, if necessary, more alcohol, until twelve fluid ounces shall have passed. Setting this aside, cover the material with diluted alcohol, and continue the displacement until the root is entirely exhausted of its medicinal properties; evaporate in a vacuum to four fluid ounces, and mix with the twelve fluid ounces reserved, making one pint of fluid extract.

This gives a preparation of the strength of one ounce of crude material to one fluid ounce of extract; and as the dose of the powdered root is from

twenty to sixty grains, that of the fluid extract will form one-third to one fluid drachm.

The form of a fluid extract allows of its ready combination with other fluid extracts, depending upon the purpose for which the combination is made.

Leptandra possesses valuable tonic, cholagogue and laxative properties; is much employed in hepatic affections—and for this purpose is not unfrequently combined with the fluid extract of mandrake, in bilious and typhoid fevers, in dyspepsia and dysentery.

SOLUBILITY OF ALKALOIDS IN OLIVE OIL.

We have already furnished our readers Pettenkoffer's experiments on the solubility of alkaloids in chloroform (page 17 of this volume). We now furnish the result of his observations on their solubility in olive oil. It is suggested such solutions might be employed, instead of pomatums or ointments, for external application of these agents. One hundred parts of olive oil, at ordinary temperatures, will dissolve of—

Morphia,	0.00 parts.
Narcotina,	1.25 “
Cinchonia,	1.00 “
Quinia,	4.20 “
Strychnia,	1.00 “
Brucia,	1.78 “
Atropia,	2.62 “
Veratria,	1.78 “

[*Jour. de Pharm., and Jour. and Trans. of Md. Col. of Phar.*]

DETECTION OF PLUMBAGO IN IRON REDUCED BY HYDROGEN.

M. Liénart has found that the *pulvis ferri*, or iron reduced by hydrogen, for medicinal purposes, is sometimes sophisticated with plumbago or black lead. This fraud is easily detected by dissolving the iron first with weak sulphuric acid, and terminating the operation with aqua regia; the plumbago remaining can be collected upon a filter and examined. The author has found as much as fourteen per cent in some specimens.—*Chem. News*, Dec. 10, 1859.

ADULTERATION OF LIQUORS.

Dr. Hiram Cox, inspector of liquors at Cincinnati, in a late report on their adulteration, relates that he observed one day, in a grocery store, a man shedding tears and gasping while drinking a glass of whiskey. He called for some of the same, and a piece of litmus paper dipped in it turned scarlet. He took the liquor to his laboratory, and the analysis gave seventeen per cent of alcoholic spirits, instead of forty, which is proof, the difference being made up with red pepper, caustic, potassa, nux vomica, &c. One pint of such liquor would kill the strongest man.—*Phil. Med. and Surg. Reporter*.

[Dr. Cox has, in pursuing his investigations, made a thorough examination of such liquors as he found in market. Over 600 inspections have been made, and ninety per cent of all that he has analyzed he found filled with poisonous ingredients. His developments have caused considerable confusion among distillers and brewers, as well as habitual drinkers of the poisonous compounds. Much of the brandy sold is simply whiskey, colored, and flavored with oil of almonds and oil of cognac. The whiskey often is not rectified, and contains all the impurities of raw whiskey.]

ANALYSIS OF TOKAY WINE.

By Dr. Ziurk.

The quantitative analysis gave the following results:—

One hundred grammes of a pure sample of this wine contain—

Absolute alcohol,.....	9.108 grammes.	
(Enanthic ether (inponderable),.....	..	“
Grape sugar,.....	11.031	“
(Enanthin (gum),.....	4.137	“
Fatty matter,.....	0.007	“
Albuminous matter,.....	0.113	“
Tannin,.....	0.311	“
Extractive,.....	1.478	“
Acetic acid,.....	0.032	“
Tartaric and uvic acid,.....	0.211	“
Bitartrate of potassa,.....	0.238	“
Tartrate of lime,.....	0.113	“
Phosphate of magnesia and lime,.....	0.265	“
Sesqui-oxide of iron,.....	0.113	“
Alumina and silica,.....	traces.	
Water,.....	72.700	“
Total,.....	99.957	“ J. M. M.

[*Archiv. de Pharm., and Journal of Pharmacy.*]

UNGUENTUM GLYCERINI.

Under this title, Prof. Simon, of Berlin, describes an ointment forming a most excellent excipient, composed of five parts of glycerine and one part of amyllum. It forms a smooth, butter-like substance, free of all smell, exciting no chemical action, and unaffected by temperature. It is to be preferred to similar substances: 1. For its elegance, its freedom from repulsive odor, and its not exciting erythema in irritable skins. 2. It can be kept in large quantities without undergoing any change, even when chemically combined with other bodies. 3. Extracts and soluble salts may not merely be mechanically mixed with it, but may be held in a dissolved condition, the apsortion being

thus much facilitated. 4. As its consistence remains unchanged, it does not extend beyond the parts to which it is applied. 5. It can be removed with great facility.—*Verges' Zeitschrift.*

VERATRUM VIRIDE AND GLYCERINE.

Veratrum has been used externally in local inflammation, with much success in cases of inflammation of the gums and mouth. I have found its combination with glycerine more pleasant and equally effectual as the fluid extract. Evaporate one ounce of fluid extract to half an ounce, and when warm mix with one ounce of glycerine. Apply externally, by saturating lint with it, and putting to the inflamed spot, or rub the parts thoroughly with it and cover with flannel. J.

FORMULA FOR ADMINISTRATION OF QUININE.

Dr. J. W. Ellis, of Marion, Ind., gives the following formula for the administration of quinine, and claims for it the advantage of being pleasant to the taste. We give it for the benefit of such as desire to try it:—

R.—Quinine,	20 grains.	
Tannin,	6	"
Aqua,	$\frac{1}{2}$	ounce.
Simple syrup,	1 $\frac{1}{2}$	"
Essence of peppermint,		
Essence of cinnamon,	aa. 5 drops.	M.
		[<i>Druggists' Circular.</i>]

Editorial.

CONVENTION FOR REVISING THE PHARMACOPŒIA.—This Convention meets at Washington on the 2d of May, for the purpose of revising the Pharmacopœia of 1850, and the presentation of a new one for 1860. This is an important work, involving judgment and experience. Many substances, at one time much employed by the profession, are passing out of use, although not entirely discarded, giving place to new remedies brought to the notice of the profession without being fully adopted; therefore the necessity of the primary and secondary lists—the one including substances of recognized efficacy; the other, those employed as remedies of apparent importance, to be tested by the judgment and experience of the profession.

The section of fluid extracts was quite new in 1850. Some additions are now suggested. The Committee of the Pharmaceutical Association to which this subject was referred, at its last meeting, recommended that there should be made officinal: fluid extracts of buchu, ergot, wild cherry, cimicifuga, cinchona, gentian, ipecac, lobelia and taraxacum—an addition of nine preparations to the present list, or sixteen in all, from the large number now in

use, numbering over one hundred and fifty kinds. We can readily understand why it is not deemed best, at this time, to incorporate this element too largely into the national Pharmacopœia. They are not recognized in other Pharmacopœias, being of comparatively recent introduction. Until their utility is fully established, it is deemed best not to endorse too large a number. These considerations apply very properly to those from the secondary list of remedies; but when the article is recorded in the primary list, a preparation of it, representing for each fluid ounce one ounce of the material, the dose, in grains, of the latter being represented by the same number of minims of the former, seems to us more convenient and available to the physician than the crude root, which must undergo preparation before it can be used advantageously. We refer more particularly to those articles in use largely, as aconite (leaves and root), belladonna, hyoscyamus, stramonium, conium, sanguinaria, chamomile, colchicum (root and seed), cranesbill, leptandra, foxglove, ipecac, jalap, podophyllin, rhatany, spigelia, seneka, serpentaria, squill, uva ursi, and veratrum viride, and, perhaps, others, the use of which probably are not as large, but as important, in many respects, as *Pareira brava*, *cannabis indica*, hop, *cypripedium*, *matico*, &c. As reliable remedies, all the above appear to be as fully established as those it is proposed to introduce.

The uniform standard of strength proposed is desirable, and the uniform presence of the active constituents of the drug must necessarily depend upon the quality of the article employed, and its methodical extraction, as well as subsequent care in manipulation.

The subject of weights and measures will be discussed at this Convention, but it is doubtful if any change in the present system will be made immediately.

We shall endeavor to give its proceedings in our next issue.

The following gentlemen have been appointed delegates to the Convention:—

To the Editors of the Medical and Surgical Reporter:

GENTLEMEN:—The weekly issue of your journal affords the opportunity of publishing a complete list of delegates to the Convention for Revising the Pharmacopœia, to meet in Washington on the first Wednesday in May next, so far as their names have been sent to me up to the present time. The lists hitherto published have been more or less imperfect, in consequence of the necessity of sending the names in time for insertion in the journals issued at the beginning of March. I have received notices of the following appointments:—

From the Medical Association of Maine—Drs. Alonzo Garcelon, W. T. Cummings, and A. F. Fuller.

From the Massachusetts College of Pharmacy—Messrs. Theodore Metcalf and Chas. F. Carney.

From the Connecticut Medical Society—Drs. Henry Bronson, N. B. Ives, and Gordon W. Russel.

From the Medical Society of the State of New York—Drs. E. R. Squibb, Howard Townsend, and Caleb Green.

From the New York Academy of Medicine—Drs. B. W. McCready, E. H. Davis, and E. R. Squibb.

From the College of Pharmacy of the City of New York—Messrs. Wm. Hegeman, Alex. Cushman, and John Meakin.

From the Medical Society of the State of Pennsylvania—Drs. J. Augustus Ehler, Wilmer Worthington, and W. R. Finley.

From the College of Physicians of Philadelphia—Drs. George B. Wood, R. P. Thomas, and Robert Bridges.

From the University of Pennsylvania—Drs. Joseph Carson, R. E. Rogers, and Joseph Ledy.

From the Jefferson Medical College of Philadelphia—Drs. Franklin Baché and T. D. Mitchell.

From the Philadelphia College of Pharmacy—Messrs. Wm. Procter, Jr., Edward Parrish, and Alfred B. Taylor.

From the Faculty of Physic of the University of Maryland—Professors Samuel Chew, Chas. Frick, and Wm. E. Alkin.

From the Maryland College of Pharmacy—Messrs. G. W. Andrews, Israel J. Grahame, and Alpheus P. Sharp.

From the Medical Society of the State of North Carolina—Drs. William George Thomas, Peter E. Hines, and Edward Warren.

From the Cincinnati College of Pharmacy—Messrs. E. S. Wayne, W. S. Merrell, and W. J. M. Gordon.

From the Chicago College of Pharmacy—Professors F. Scammon, J. H. Rauch, and George Buck.

GEO. B. WOOD, *President of the Convention of 1860.*

THE American Medical Association will hold its thirteenth annual meeting, at New Haven, on the first Tuesday of June, 1860.

BOSTON MEDICAL AND SURGICAL JOURNAL.—Drs. Morland and Minot have withdrawn from this journal, and Drs. Oliver and Ellis have assumed its charge. This journal is among the oldest journals published in this country, and has always occupied a high and independent position.

THE *Virginia Medical Journal* makes its appearance this year under the new title of the *Maryland and Virginia Medical Journal*, and is edited by Drs. J. B. McCaw and W. C. Van Bibber. This journal has always been one of the ablest and best conducted journals in the country.

THE *Louisville Medical Journal*, published by Dr. John R. Timberlake, is edited by Dr. Thomas Colescott. Dr. Colescott was connected with a journal formerly published in Louisville, and has the reputation of being an able writer, well versed in medical literature.

TO CORRESPONDENTS.—We cut the annexed from the "*Country Gentleman*," and insert it for the purpose of showing the great caution necessary to be used in giving the full address in writing letters. We were obliged, a short time since, to address *twenty-six* letters to postmasters, to ascertain the residence of a physician who omitted to put the name of the State upon his letter:—

CARELESS LETTER-WRITERS.—We lately received a letter from a subscriber, complaining that he had been cheated by a person who some time since advertised some seeds in this paper—that is, he had sent the required seeds, but had received no stamps in return. Knowing the advertiser to be an honest man, we sent our correspondent's letter to him, that he might explain the cause of the failure. In reply, he says:—"I have received over 300 letters since the publication of my advertisement in the *Country Gentleman*, and in twelve of them the writer's name is wanting, and several of them no post office, or anything else by which I could find out his residence, is given. I have now over twenty of these letters, which I have been unable to answer, either for the want of the name or residence of the writers. These letters have given me a vast deal of trouble; and I wish you would try to impress upon your readers the necessity of giving their full address." Our advice to those who have sent stamps for seeds, and have not received them, is to write again, and be careful to give their names, post office, county, and State.

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THE JOURNAL OF MATERIA MEDICA.

DEVOTED TO

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Vol. II.]

MAY, 1860.

[No. 5.]

Indigenous Tonics.

—
BY CHARLES A. LEE, M. D.

—
NUMBER V.

LIRIODENDRON TULIPIFERA.

(*Tulip Tree*—*Poplar*—*American Poplar*—*White and Yellow Poplar*, &c.)
Natural Order, *Magnoliaceæ*; Linnean System, *Polyandria*—*Polyginia*.

THIS well-known tree, one of the most beautiful of our American forests, needs no special description. Deriving its name from the resemblance of its flowers to those of a lily, it constitutes the only species of the genus, and is closely allied to the magnolias, not only in its botanical affinities, but its medicinal properties. The general character of the order is, to have a bitter tonic, aromatic taste, and fragrant flowers; the latter producing a decided and specific action on the nervous systems. The tulip tree is met with in nearly all parts of the United States, from Florida to Canada, and is especially abundant in Ohio, Kentucky, and Tennessee. The Connecticut river seems to be the eastern limit of this tree, and it is rarely found north of Lake Champlain. Loudon makes three varieties: 1st, the *blunt-leaved tulip tree*; 2d, the *acute-leaved tulip tree*; 3d, the *yellow-flowered tulip tree*, or *obtusiloba*, *acutifolia* and *flava*. Griffith states that there are two varieties, one having the side lobes of the leaves acute, and the

other obtuse, as well as two varieties in the color of the wood, one being white, the other yellow. Rafinesque states, in his Medical Flora, that the white-wood belongs to the acute-lobed variety, and the yellow wood to the obtuse-lobed, but it is found that there is no uniformity in this respect, and that the only way to determine the color of the wood is actual inspection. The wood is very valuable for many purposes, being light, fine grained, and easily worked, besides being very durable, if not exposed to the weather.

Chemical Composition.—The first elaborate analysis of the bark of the *liriodendron* was made by Dr. Emmet, in 1832, (*Phil. Jour. Pharm.*, vol. 3, p. 5.) He gives the name of *liriodendrine* to what he believed to be the active principle. In the pure state, he describes it as solid, white, crystallizable, brittle, insoluble in water, soluble in alcohol and ether, fusible at 180° , volatilizable and partly decomposed at 270° , of a slightly aromatic odor, and a warm, bitter, pungent taste. It is incapable of uniting with alkalies, which precipitate it from the infusion or decoction of the bark by combining with the matter which renders it soluble in the water. It does not combine with acids, and is precipitated by water from its alcoholic solution. He obtained it by macerating the root in alcohol, boiling the tincture with magnesia till it assumes an olive-green color, then filtering, concentrating by distillation till the liquid becomes turbid, and finally precipitating the *liriodendrin* by the addition of cold water. The virtues of the bark are exhausted by water and alcohol, but are injured, if not entirely destroyed, by long boiling. According to the earlier analysis of Dr. Rogers, in 1802, (*Inaug. Disser., Phil.*), the bark contains gum, resin, muriatic acid, iron, salts of lime, vegetable mucus, and starch. As the properties of this bark are dissipated by long keeping and exposure to the air, the active principle has been supposed to be volatile. Dr. Wood states, and we can corroborate the fact, that specimens of the bark, which have been long kept in the shops, are almost insipid. This, taken in connection with the other fact mentioned, namely, that its properties are lost by boiling, there is good reason to believe that its peculiar properties do reside at least, in part, in a volatile principle.

The most recent analysis, that of the Tildens, gives the following results:—

Organic Matters,	-	-	-	-	-	-	94.166
Inorganic "	-	-	-	-	-	-	5.834
							<hr/>
Total,	-	-	-	-	-	-	100.000
Albumen,	-	-	-	-	-	-	0.939
Gum,	-	-	-	-	-	-	0.989
Starch,	-	-	-	-	-	-	2.285
Extractive,	-	-	-	-	-	-	3.008
Bitter Matter,	-	-	-	-	-	-	3.716
Sugar,	-	-	-	-	-	-	0.985
Coloring Matter,	-	-	-	-	-	-	5.149
Oil,	-	-	-	-	-	-	5.677
Resins,	-	-	-	-	-	-	5.362
Soluble Salts,	-	-	-	-	-	-	0.875
Insoluble Salts,	-	-	-	-	-	-	4.959
Lignin, etc.,	-	-	-	-	-	-	66.106
							<hr/>
Total,	-	-	-	-	-	-	100.000

The strong aromatic pungency of this bark, doubtless, resides in the volatile oil; of which it contains over five per cent, exceeding in amount the bitter principle, and the medicinal properties depend, for the most part, on this combination.

The amount of albumen, gum, and starch is very small, less, indeed, than in almost any known bark. It is entirely destitute of tannic or gallic acid, and possesses no astringency. The bitter principle holds a place between the resins and essential oils, uniting neither with acids nor alkalies, when pure.

Medicinal Properties and Uses.—The bark of the liriodendron, as its chemical composition would indicate, is a stimulating, diaphoretic tonic, with considerable antiperiodic virtues. The cold infusion acts as a diuretic. The bark of the root is less stimulant and more purely tonic than that of the trunk, or smaller branches, and is always to be preferred. Experience has abundantly established the virtues of this bark in the cure of intermittents, and other paroxysmal diseases where tonics are indicated. Dr. Rush ranked it next to Peruvian bark in such affections. It has had considerable reputation, also, in the cure of chronic rheumatism and gout—probably from its diaphoretic properties, combined with its tonic influence—and the same combination has recommended it in dysentery, especially in the advanced stages, as well as chronic diarrhea. Formerly, and perhaps at the present time,

in some parts of our country, it was employed a good deal as a domestic remedy for worms. Dr. Young states that he has never known it to fail in a single case of the kind that came under his observation, (*Eberle, Ther.*) We have reasons, however, to believe that its anthelmintic properties are no greater than those of the bitter tonics generally. Like the other bitters, when given in powder and in considerable doses, it is very certain to prove laxative or cathartic. The resinous principle in the bark of the *liriodendron* renders it somewhat irritating in irritable states of the stomach, and the gastro-intestinal mucous membrane, and imparts to it the cathartic properties. In many cases the stomach will not tolerate it unless each dose is accompanied by some opiate preparation, as a few drops of laudanum. Its use by the aborigines of our country, in the cure of intermittents has been described by the poet:—

"If fever's fervid rage,
 Glowed in the boiling veins," * * *
 * * * * "Anxiously they sought
 The *Liriodendron*, with its varied bloom,
 Orange and green and gold," * * *
 "To supply
 The place of famed *Cinchona*, whose rough brow,
 Now ruddy, and anon with paleness marked,
 Drinks, in its native bed, the genial gales
 Of mountainous Peru."

In many parts of the West, this bark, in combination with dogwood, is steeped in brandy, and taken as a remedy, as well as preventive of fever and ague, and with marked success.

Preparations: Powder, fluid extract, tincture, wine, syrup.—The powder has been generally employed, but its bulk, compared with the amount of active principle, as in the *cinchona* and other barks, renders this form objectionable. A hydro-alcoholic fluid extract, prepared *in vacuo*, would be the most eligible of all other preparations, inasmuch as it would contain all its active principles, including the volatile oil, in a concentrated form. The dose would be from one to three drams. The tincture, made to complete saturation, answers well as a stomachic tonic, and the same remark will apply to the wine, made with good sherry or madeira. The syrup is best prepared from the fluid extract, adding the usual portion of simple syrup, as before mentioned in regard to other tonic and astringent substances. A good fluid extract of this substance, prepared in a proper manner, is yet a desideratum.

SALIX (*Willow*).

Natural Order, *Salicaceæ*; System Linnean, *Diocæa*—*Diandria*.

This natural order embraces two well-known genera in North America, viz: the *salix* and *populus*, both possessing similar medicinal properties, and both employed in the arts, and for their therapeutical virtues from a very remote antiquity. The willow is a very large genus, confined mostly to the temperate latitudes of both hemispheres.*

The *salix alba* has only been recognized by our National Pharmacopœia, but it is very doubtful whether it contains as much of the active principles of the genus as some of our native species. Nor does it contain as much as the *S. russelliana*, (*the Bedford willow*), the *S. purpurea* or the *Cupria*, all of which are naturalized in many parts of our country.

Chemical Composition, &c.—The white willow (*S. alba*) has been repeatedly analyzed by European chemists, especially Pelletier and Caventou, who found in its bark *bitter yellow coloring matter*,

* The following species, according to Carey, have been found indigenous to the United States, though there are, doubtless, others not yet described:—

- S. Candida*—Hoary Willow.
- S. Tristis*—Dwarf Gray Willow.
- S. Humilis*—Low-bush Willow.
- S. Discolor*—Glaucous Willow.
- S. Eriocephala*—Silky-headed Willow.
- S. Sericea*—Silky-leaved Willow.
- S. Petiolaris*—Petioloed Willow.
- S. Cordata*—Heart-leaved Willow.
- S. Angustata*—Narrow-leaved Willow.
- S. Rostrata*—Long-headed Willow.
- S. Nigra*—Black Willow.
- S. Lucida*—Shining Willow.
- S. Longifolia*—Long-leaved Willow.
- S. Pedicellaris*—Stalk-fruited Willow.
- S. Uva Ursi*—Bearberry Willow.

Seven other species have been introduced from Europe, viz:—

- S. Alba*—White Willow.
- S. Fragilis*—Brittle Willow.
- S. Phyllicifolia*—Smooth Mountain Willow.
- S. Repens*—Creeping Willow.
- S. Herbacea*—Herb-like Willow.
- S. Purpurea*—Purple Willow.
- S. Viminalis*—Basket Osier.

green fatty matter, similar to that found in cinchona; tannin, resinous extract, gum, wax, a magnesian salt, containing an organic acid and woody fibre. They, however, failed to detect salicine. Their resinous extract has been supposed to be identical with what Braconnot calls corticin. Sir Humphrey Davy analyzed two species of willow, viz: *S. ruselliana* and *alba*; from four hundred and eighty pounds of the first he obtained thirty-three pounds of tannin, and from the *alba* eleven pounds. It is difficult to say why the *alba* should continue to be the officinal species, while it is so far inferior to several of the others, probably, because it was the species employed in medicine by the ancients, and brought again into notice in 1763 by the Rev. Mr. Stone. Tilden's recent analysis of our *S. eriocephalus*, (*willow pussy*, or *silky-headed willow*), gives of—

Organic Matters, - - - - -	96.846
Inorganic Matters, - - - - -	3.154
<hr/>	
Total, - - - - -	100.00
Albumen, - - - - -	0.797
Gum, - - - - -	1.675
Starch, - - - - -	7.115
Sugar, - - - - -	1.171
Extractive, - - - - -	3.510
Tannin, - - - - -	2.285
Coloring Matter, - - - - -	7.232
Chlorophylle, - - - - -	0.905
Resin, - - - - -	4.354
Salicin, - - - - -	5.714
Populin, - - - - -	1.143
Soluble Salts, - - - - -	1.142
Insoluble Salts, - - - - -	2.012
Lignin, &c., - - - - -	60.945
<hr/>	
Total, - - - - -	100.000

A decoction of willow bark, made with distilled water, is colored dark green by sesquichloride of iron, but with spring water dark purple. Solution of gelatine produces a precipitate, (*tannate of gelatine*), but tincture of nut-galls causes no turbidness. A strong decoction of willow bark, containing much salacine, is reddened by concentrated sulphuric acid—*salacine*. This substance exists in the bark and leaves of a great variety of trees, and especially

in the *populus*, and those species of *salix* which possess a bitter taste. It may readily be obtained by boiling three or four times in water, evaporating the decoction till it amounts to but three times the weight of the bark employed, then digesting for twenty-four hours with oxide of lead, and evaporating the clear liquid to the consistence of a syrup. After a few days this becomes a mass of crystalline fibres, which, separated from the mother liquor, are to be purified by solution, digestion with animal charcoal and re-crystallization. Or we may obtain salacine from a cold aqueous infusion of fresh willow bark, by continuous evaporation.* Salacine, when pure, is white, very bitter, crystallizes in silky needles and laminae, is inodorous, neutral to vegetable colors, fusible at 250° F., more soluble in boiling than cold water, one hundred parts of which dissolve only 5.6 parts of salacine, soluble in alcohol, but not in ether or the volatile oils. It is not precipitated by any agent; oil of vitriol colors it blood red, and is its most reliable test. Chromic acid is also a good test of its presence, inasmuch as it converts salacine into *salicylic acid* (oil of meadow-sweet), *carbonic acid*, and *formic acid*.

Salacine was obtained by Fontana in 1825, though in an impure state. Leroux succeeded, in 1829, in procuring it pure. It has now been found in fifteen species of *salix*, eight species of *populus*, and in the bark, leaves and flowers of other trees. Sixteen ounces of the bark and twigs of the *S. helix* have yielded 251 grains of salacine, and the same weight of bark of the *S. pentandra* have yielded 300 grains.

Physiological and Therapeutical Effects—The willow bark possesses, in a considerable degree, all the virtues of the *astringent*

* A good method for obtaining salacine is to macerate ℥ xvi. of willow bark in a mixture of ℥ ij. of lime, in eight pints of water; boil for half an hour. Repeat this twice with the residue. Concentrate the clear decoctions to two pints, digest with animal charcoal, filter and evaporate to dryness; next exhaust the extract with spirit containing 28 per cent of alcohol; distill off the greater part of the spirit, and leave the residue to crystallize. A second crystallization and digestion in animal charcoal purifies them. Sixteen ounces of the bark of *S. alba* yields 3 v. of salacine by this process. All those species of *salix* which are very bitter contain salacine. But to determine the point with certainty boil 3 j. of the bark in ℥ iv. distilled water; digest in the decoction 3 j. of litharge, in fine powder; filter and precipitate the lead with sulphuretted hydrogen gas, then evaporate to f. ℥ j. If, in this solution, sulphuric acid produces a bright purple-red, salicine is present.

bitters; and these are not dependent on any one organic principle, but upon several, as *tannin*, *extractive*, *resin*, *salacine*, *populine?* &c. The most important tonics of this class are *cinchona bark*, *willow bark*, and *elm bark**—all combining bitterness and astringency in an eminent degree. In addition to the ordinary properties of tonics, they are known to control paroxysmal affections with greater certainty and promptness than those belonging to the other class of tonics. We may say of the willow bark, in general, that it is less apt to disturb the stomach than cinchona, but its tonic and febrifuge properties are less than the latter. Some writers ascribe to it balsamic properties, in common with the populus. It should be remarked that some of our native species have very slight medicinal virtue, containing, as they do, but little salacine and bitter extractive, but a large amount of gum and sugar (mannite). The bark and juice of the willow were recommended by Dioscorides, as useful astringents; and every writer on materia medica, from that time to the present, has only repeated what this writer, and Theophrastus, Celsus and Galen have set down regarding its virtues. They all testify that it possesses excellent tonic properties, and is well adapted to the cure of intermittents. Experience also has established its reputation as a useful corroborant in atony of the digestive organs, in convalescence from acute affections, and in ordinary chlorosis, chronic diarrheas and dysenteries. We have found it of great service in scrofulous affections, and in relaxed and debilitated states of the system, passive hemorrhages, &c., where an astringent influence, conjoined with a tonic, is indicated. As the powdered bark of the willow is better borne than that of cinchona, and more acceptable to the stomach, it is often given in half-dram doses, as an ordinary tonic, three times a day, and in the quantity of one or two ounces, during a single intermission, in intermittents.

Salicin.—During the last twenty years salicin has nearly superseded the other preparations of the willow, although it does not possess the full antiperiodic power of the powdered bark. The salacine was brought prominently into notice in 1825, by Leroux, of Paris, and in 1826 a report upon it was made to the French

* *U. alata*, *U. racemosa*, and *U. Americana*.

Academy of Sciences by MM. Gay Lussac and Majendie, which was the occasion of its general introduction into practice. Majendie states that his own experience of its effects in intermittent fevers is favorable, and that he has often seen three doses, of six grains each, stop the paroxysm. He quotes the experiments of MM. Miguel, Husson, Bally, Girardin, Cagnon, &c., at the hospitals, in its favor; they all agree in its anti-febrile power, and in stating that from twenty-four to thirty grains of salacine will arrest the return of the fever, whether quotidian, tertian, or quartan. The same testimony was borne by Buchner, in Germany, and Rigatelli, in Italy. We now know, however, that its praises as a febrifuge equal, if not superior, to cinchona, were greatly exaggerated. In 1832, M. Pelletier made numerous trials of salacine at La Charité, by which it appeared that, though very bitter, it was less active than quinine. About this period opinions regarding its efficacy were extremely various: while some extolled it as a remedy of great power, others claimed that it possessed no obvious febrifuge properties. To settle the question, M. Andral, in 1833, entered on an extended series of trials and observations in hospital practice, and came to the following conclusions:—1st. Salacine possesses febrifuge qualities, but in so small a degree that we ought not to hesitate a moment in preferring the sulphate of quinine. 2d. Salacine may be employed in any case where irritation or inflammation exists, contra-indicating the employment of sulphate of quinine, in hectic fevers with periodical paroxysms and abundant diarrhea, or where sulphate of quinine cannot be had. 3d. It is not only unnecessary, but injudicious, to employ it at the beginning in high doses. Six or eight grains, administered between the paroxysms, on the same principles as sulphate of quinine, produce as good, or even better, effects than higher doses, though, if necessary, the doses may be increased.

In the year 1845, Dr. Lawson, surgeon-general United States army, issued a circular to the surgeons of the army, together with a large supply of salacine to all the military posts, directing experiments to be made with it in the treatment of malarious fevers, in order to determine its true febrifuge and antiperiodic virtues, its proper doses, and, in short, its entire effects, with its *modus operandi*, &c. The replies to the circular, so far as we have learned, went to sustain the conclusions of Andral, as stated above, that in

the treatment of intermittents it was far less reliable than quinine, and, considering the greater quantity required, was not less expensive, but that it was a valuable tonic in all cases where an antiperiodic effect was not desired, as in atonic dyspepsia, convalescence from acute diseases, &c. At present, the quantity of salacine used in the United States army is much less than it was a few years ago, quinine being the main reliance. Our own trials with it have satisfied us that in mild intermittents from twenty to thirty grains of salacine will arrest the paroxysms, and with about the same certainty as half the quantity of quinine; that it generally sets better on the stomach, rarely causing irritation, even in sub-inflammatory states of the organ; that it is better adapted to diseases of infants and young children where tonics are indicated, and to diseases generally where a mild tonic influence is desirable to be sustained for a considerable time. We have never known any injurious effect from it, even when given in large doses; no cerebral disturbance, as is witnessed from quinine, nor any derangement of the functions of special sense. It invigorates the digestive organs, while it does not derange the biliary function nor check the gastric or intestinal secretions. Our average dose has been about two grains, varying according to the circumstances of the case. Salacine has been a favorite tonic with the physicians of New England for the last twenty years, especially in the valley of the Connecticut River. Wholesale druggists in New York city have informed me that for many years their sales of salacine in the Eastern States exceeded those of quinine, and further inquiry led us to ascertain that it was the principal and favorite tonic relied on in that region wherever this class of remedies is indicated. Whether it is as generally employed at the present time, we have no means of judging: some circumstances, however, lead us to infer that other remedies have, to a considerable extent, superseded it.

Preparations, Doses, &c.: Powder, infusion, fluid extract, and salicine.—The powder is better borne by the stomach than cinchona and most other tonics. The dose, as an ordinary tonic, is from ten to fifteen grains; if it is used as a substitute for Peruvian bark in intermittents, it must be given in dram doses, so that from one to two ounces are taken during a single intermission.

The *infusion* or *decoction* is made with an ounce to the pint of water. Dose, one or two fluid ounces. From one to two pints must be given between the paroxysms of an intermittent, in frequent, divided doses. The decoction is a useful topical application in indolent, flabby, or foul ulcers. The *fluid extract* is not yet in market. It would have great advantages over either of the preceding preparations. *Salicine*.—This is the usual preparation now in use. It does not, however, combine all the virtues of the willow, as the *fluid extract* would, and probably is less efficacious as an antiperiodic, besides being much more expensive. When taken internally it gives to the urine the odor of salicylous acid, into which it is converted in its passage through the system. Dose, two to twenty grains.

The foreign species of *salix* in which *salicine* has been found are: *S. fissa*, *S. helix*, *S. amygdalina*, *S. vitellina*, *S. incana*, *S. pentandra*, *S. alba*, and *russelliana*. It has also been obtained from *populus tremula*, *nigra*, *græca*, *angulata*, and *alba*. Our indigenous poplars nearly all contain *salicine*, and a large majority of our willows.

Iron and Its Preparations.

[CONTINUED.]

FERRI ARSENIAS (*Arseniate of Iron*).—Dose, 1-16th to 1-12th of a grain, made into a pill. According to Carmichael, this preparation acts more powerfully on the vitality of cancerous formations than any other agent, and the dead slough caused by it is much deeper than that caused by the application—which was at one time so much celebrated—called “Plunket’s Caustic.” He allows, however, that the greatest caution should be observed in its use. It has also been administered internally in cancerous affections and lepra, in lupus, lichen, elephantiasis, psoriasis and chronic eczema, and M. Duchesne Duparc feels authorized, from numerous facts accurately observed, in concluding, that a daily dose of a fifth of a grain, uninterruptedly repeated during the necessary time, is competent, in the adult, to effect the cure of an herpetic or squamous affection, however extensive or long established.

R.—Ferri Arseniat,	- - - - -	3 ss.	
“ Phosphat,	- - - - -	3 ij.	
Cerat Cetacei,	- - - - -	3 vi.	M.

This ointment must be spread on lint and applied to the ulcer.

The following formula may be used in cancerous and other affections:—

R.—Ferri Arseniat,	- - - - -	gr. iii.	
Ext. Gentian,	- - - - -	3 i.	
Glycyrrhiz, pulv.	- - - - -	3 ij.	
Syrup,	- - - - -	q. s.	

Make a mass and divide into forty pills. Dose, one three times a day.

FERRI AMMONIO TARTRAS (*Ammonio Tartrate of Iron*).—Dose, five grains or more given in pill or solution. This salt has the general properties of the other ferruginous compounds. Its advantages are its ready solubility, palatable taste and permanency.

FERRI OXIDUM NIGRUM (*Black Oxide of Iron*).—Dose, five to twenty grains, two or three times a day. The oxide, from the formula of the Edinburgh College is a valuable chalybeate, having the merit of uniform composition and permanency under the influence of air and moisture.

FERRI PHOSPHAS (*Phosphate of Iron*).—Dose, five to ten grains. This preparation is the result of a double decomposition between sulphate of iron and phosphate of soda. It has been given with advantage in amenorrhœa, and in some forms of dyspepsia.

R.—Ferri Ammonio-chloridi,	- - - - -	grs. xii. to xx.	
Soda Sesquicarbonatis,	- - - - -	grs. xii.	
Ammonia Sesquicarbonatis,	- - - - -	℥j.	
Syrupi,	- - - - -	℥ ss.	
Aquæ Distillatæ,	- - - - -	℥ vss.	M.

Dose, ℥j., three times a day. In debility with acidity and flatulence.

R.—Tinct. Ferri Sesquichloridi,	- - - - -	3 j.	
Spirit Aetheris Nitric,	- - - - -	3 ij.	
Sacchari,	- - - - -	℥j.	
Aquæ,	- - - - -	℥ v.	M.

Dose, two tablespoonsful twice a day,

R.—Tinct. Ferri Amm.	- - - - -	3 jss.	
Infusi Quassæ,	- - - - -	℥ jss.	
Ammonia Sesquicarb.	- - - - -	gr. vi.	
Syrupi Aurantii,	- - - - -	3 j.	
Aquæ Distillatæ,	- - - - -	3 vii.	M.

Make a draught, to be taken two or three times a day. For hysterical women.

R.—Ferri Citratis,	-	-	-	gr. xii.	
Syrupi,	-	-	-	3 iij.	
Aquæ Distillatæ,	-	-	-	3 iij.	M.

Dose $\frac{3}{4}$ ss. three times a day. An excellent form for giving citrate of iron to children.

R.—Ferri Ramentorum,	-	-	-	3 iij.	
Iodinii,	-	-	-	3 vj.	
Aquæ Distillatæ,	-	-	-	3 xvj.	

Put the iodine and iron in a bottle, then add the water, and having shaken them well together, keep the bottle in a warm place for three days. Lastly, pour off the clear solution and keep a coil of iron wire suspended in it. Dose, fifteen minims to one fluid dram thrice daily, in a little aromatic water with syrup.

R.—Ferri Sulphatis,	-	-	-	grs. xii.	
Acidi Sulph. Dil.	-	-	-	3j.	
Tinct. Cardamomi Comp.	-	-	-	$\frac{3}{4}$ ss.	
Infusi Rosæ Comp.	-	-	-	$\frac{3}{4}$ vss.	

Dose, two tablespoonful two or three times a day.

Datura Stramonium.

(THORN-APPLE.)

THE *Datura Stramonium*, like many other plants, has received a variety of different names in different places. In the Southern States it is commonly called Jamestown weed, because a number of sailors were once violently diseased by ignorantly eating the boiled plant at Jamestown, in Virginia. It is called French chestnut in New Jersey, probably from the resemblance which its pod bears to that of a chestnut. It is sometimes vulgarly called stink-weed, from the disagreeable odor which it emits. But it is most generally known by the name of thornapple.

Taken in a moderate dose, stramonium produces light vertigos, and a slight disposition to sleep; muscular energy is diminished; the sensibility is weakened; dilatation of the pupil, slight difficulty in the vision, acceleration of the pulse, increase in the heat of the skin, thirst and burning in the throat; the urine is secreted in greater quantities; perspiration, when there is neither diuresis

nor diarrhea. But in larger doses, vertigos, feelings of prostration and general weakness, light stupor, soon trouble in the vision, enormous dilation of the pupils, spasms, intense agitation, furious delirium, continuous hallucinations, obstinate wakefulness, high fever, a dry, hot skin, oftentimes covered with a scarlatinous eruption; ardent thirst, dryness, and very painful constriction of the pharynx; frequent impossibility of swallowing; vomitings, diarrhea, constant desire to urinate, but little or no urine. When the intoxication has become fatal, collapse succeeds the agitation, chilliness, and at last death. When the poison has not proved fatal, these formidable symptoms subside, with the exception of the dilatation of the pupils, the obscurity of vision, while often a passing blindness ensues. This delirium and blindness continues, sometimes many days, and even many weeks. The delirium is never gay, never sad; but singular hallucinations, fantastic visions, always accompany it: it is this which has given to stramonium and belladonna the name of the *sorcerer's plant*, *devil's herb*, because, in the ages of superstition and ignorance, the pretended sorcerers used them to produce on their poor patients the fantastic hallucinations they were wont to practice when on the midnight vigils, and gain thence the prestige of being possessed of superior power; it is by this same means that the sorcerers and enchanters procured to lovers their imaginary pleasures. With a species of datura, the Indians, under the name of *bangues*, the Arabs and the Turks under the name of *maslac*, prepared their amorous philters. The women of India make of the datura a beverage to administer to their husbands, not to excite their desires, but to deceive their vigilance when suspicions may have been excited. The judiciary annals contain a famous process instituted against a company of thieves, known as *cajolers*, who mixed powdered stramonium seeds with tobacco, then placing themselves on either side of those to whom they frequently offered the mixture, easily robbed them when they became giddy and delirious.

In the treatment of poisoning by stramonium, the first indication is not to leave any of the poisonous substance in contact with the absorbent surfaces; so that vomiting and purging will always be desirable when the poison is contained in the stomach and alimentary canal. Acids, cold drinks, cold baths, and opium will be used with advantage for calming the nervous symptoms that

supervene, taking care not to administer these acid drinks till the greatest quantity possible of the poison has been expelled by vomiting.

Storck has the credit of first bringing into notice the active properties of the *datura stramonium*. With it he treated five cases: two cases of lunacy, both of which were cured; one of chorea, which was aggravated by the treatment; and two cases of epilepsy, which were only temporarily modified. A number of cases are on record, confirming the utility of stramonium employed in insanity as well as tetanus; but the use of stramonium in nervous diseases, such as mania, epilepsy, chorea, has not always proved successful in the hands of the most part of the physicians who have made trial of it in these cases; however, its incontestable efficacy in the treatment of asthma and neuralgia places it in the rank of those agents on which reliance can be placed.

The custom of smoking stramonium is a common one among the Orientals, and was imported into Europe by Dr. Anderson, physician in Madras, in 1802. This mode of treatment has had many and extensive trials in the European hospitals since, and with such success that a late author of eminence considers himself authorized in proclaiming the certain and remarkable efficacy of the *datura stramonium* employed and smoked in cases of asthma; "if, by the word asthma, we do not understand a permanent difficulty of respiration, allied to an organic lesion of the organs of circulation or of respiration, but only a dyspnoea often extreme and essentially intermittent or remittent; a dyspnoea that does not imply any appreciable material lesion of the heart or lungs; a dyspnoea wholly nervous, but which can sometimes manifest itself as a symptom, accessory and not necessary, in the various organic affections of the chest."

Among the spasmodic affections of the respiratory organs, the hooping-cough holds a place in the first rank; the success obtained by the administration of belladonna in this malady, induced practitioners to prescribe stramonium in the same cases, and with equal advantage. It is the same for all the nervous diseases which are or are not accompanied by organic lesion of the larynx or of the chest.

The employment of stramonium in the treatment of neuralgia is now among the most efficacious modes of managing that disease,

and one whose usefulness is, perhaps, least to be doubted. We have reports of a number of cases of tic-douloureux cured by administering the tincture of stramonium, in doses of four or five drops, every three or four hours; of a severe case of sciatica cured in three weeks by giving a grain and a half of extract of stramonium each day, and others to like purpose. It is efficacious in tic-douloureux of the face, and in treating osteocopal rheumatic pains. Kirchoff employed the tincture of stramonium by friction on the passage of the affected nerve; he applied the frictions ten or twelve times a day on the diseased part, and continued them some time after the cure of the disease. He cites four remarkable cases to prove the efficacy of this treatment, the last of which had existed for nine months.

Complete success has been obtained in the treatment of inter-articular rheumatism and chronic articular rheumatism, as well as in the chronic sciatic form, by administering pills composed of one-tenth of a grain of stramonium and opium. It is well to give these pills from two to ten each day, until a sensible effect has been produced upon the vision, and continue to employ them from fifteen days to a month, even after the entire disappearance of the malady.

Dr. T. G. Rademacher says: "I have used it in brain-fever with remarkably good success, as it immediately relieves the unfavorable symptoms, and cures by its continued use. At first it was a difficult matter to ascertain the quantity in which it should be given, and knowing it to be a powerful remedy I was compelled to proceed cautiously. I found that in general I needed about a dram of the tincture in twenty-four hours. Occasionally, when the pain was excessive, I have increased it to one and a half drams in the course of the day. After a number of experiments I found the following mixture to answer all the indications, and have often used it in such cases with marked effect:—

R.—Tincture of Acetate of Iron, - - -	1 ounce.
" Stramonium Seed, - - -	1 dram.
Gum Arabic, - - - - -	1 ounce.
Water, - - - - -	8 ounces. M.

Of which I directed the patient to take one tablespoonful every hour. In some cases its use has been followed by diarrhea, when I combined with the above half an ounce of the spirit of

nicotine. Many bad effects have been attributed to this agent, but I have used it in brain fever so extensively that had it exerted, in sanitive doses, any injurious effects upon the organism, I should not have failed to discover it. In only one case did this dose appear too large, and that in a lady of a peculiar nervous, irritable temperament, in whom it produced slight convulsive movements of the arms. In many experiments upon myself with this tincture, I found that it produced only a remarkable dryness of the mouth. I think it, in proper doses, a valuable agent in these cases of brain fever, accompanied with much pain, as it has been peculiarly successful in my hands when given in the proportion of a fluid dram during the twenty-four hours."

Dr. Ashby, in the *Atalanta Journal*, gives great credit to stramonium in the treatment of dysmenorrhea, which he thinks should be called membranous menstruation. He was led to the use of stramonium by the successful practice of Dr. Dears, who derived his information from Dr. Eberle, who is persuaded that we possess no other article which can at all be compared to it as a remedy in this affection. He gave the extract in doses of one-eighth of a grain, three times daily, beginning four days before the expected return of the attack. Dr. Ashby gives one-fourth to half a grain, three or four times a day, or such doses as will produce a desired constitutional influence, with dilatation of pupils, accompanied by aloetic and mercurial cathartics, and full doses of morphine and camphor, with hot fomentations, &c. In general, he has been successful; but truth and honesty require him to state, that a few cases have occurred in his practice, where he prescribed stramonium with entire confidence, in which it has utterly failed.

Dr. Wood says: "Externally this medicine is used advantageously as an ointment or cataplasm in irritable ulcers, inflamed tumors, swelling of the mammae, and painful hemorrhoidal affections. Dr. J. W. Dortch, of North Carolina, has found it very useful in tinea capitis."

"In combination with quinia it forms an invaluable preparation, which has been found exceedingly beneficial in intermittent fever, all periodic pains, headache, dysmenorrhea, delirium tremens, &c. In phlethoric habits, and in patients with determination to the head, stramonium must be administered with caution, keeping the

excretory organs, as the skin, kidneys and bowels, in an active condition during its employment."—*J. King.*

Dr. Alex. King describes the operation of this medicine as "moderately diuretic, and impregnating the urine with the smell of the seeds. It is cooling, anodyne, and sedative. It relaxes the tone of the solids, lessens the contractile force of the arterial system, and, consequently, moderates the violent attrition of the circulating fluids against their containing vessels; lowers the pulsation of the arteries, and renders the pulse lower, more uniform and equable, when excited by violent stimulants."

The action of stramonium has several times above been compared with that of belladonna. They both belong to the natural order Solanaceæ, which embraces a large number of plants of varied characteristic properties. Of those that are used in medicine, some are powerfully narcotic and poisonous, such as belladonna, mandragora, datura, hyoscyamus, nicotiana (*tobacco*); some are possessed of similar properties, but in very much less degree, such as the physalis alkengi and dulcamara; while others are eatable, as the boletus esculentus, solanum tuberosum (*potato*), and the solanum melongena (*egg plant*). The solanaceæ, placed in the first category, are all poisonous, and produce on the healthy and diseased organism effects identical in character; and indeed, belladonna, stramonium, and hyoscyamus produce on both men and the lower animals the same poisonous and therapeutic effects, and this, too, without any difference in the doses; in a word, it seems that they contain one common principle, *solanine*; for example, as the cinchonas contain *quinine*, and that the proportion of the active principle varies only according to the genera and the species. It cannot, however, be denied but that certain genera exert a special influence on certain pathologic conditions, as, for example, stramonium is more efficacious in the treatment of asthma than belladonna or tobacco; but the differences are so minute that they disappear in the generality of cases. It is not altogether with tobacco as with the rest, for to all the properties of the other poisonous solanaceæ, it joins some special properties, due to a very deleterious principle peculiar to itself.

In addition to what has been given above to be used as antidotes to stramonium in cases of poisoning, we append the remarks of Dr. L. E. Miller, from the *College Journal*:—

"In cases of poisoning by stramonium, an emetic and purgatives should be given immediately, after which may be given vinegar and water as a drink, vinegar clysters, tannic acid, coffee, sinapisms to the region of the stomach, to counteract as soon as possible the approaching apoplectic symptoms. Among the antidotes of narcotic poisons, tannic acid holds an important rank, as it combines with the alkaloid containing the poisonous matter, thereby forming an innoxious compound. It would, therefore, be well, immediately after the operation of the emetic, to give a decoction of China-oak, willow bark, or a tincture of gall-nuts, or of Chinese tea, which contain large quantities of tannic acid. For the nervous symptoms many remedies are of use, as camphor, valerian, muriate of ammonia, musk, ether, sinapisms, &c.; cold applications and foot-baths are of excellent service to prevent local congestions. Sour whey has been very highly recommended after the action of an emetic."

"Bouchardat recommends iodine; A. Garrod, animal charcoal in large quantities."

In epilepsy it has been employed with varied success. Dr. Archer, of Maryland, states that his experience confirms its use when the fits occur at short intervals, and periodically; and therefore afford time to bring the patient under the narcotic influence, before the commencement of another paroxysm. When the intervals are of irregular length, Dr. Archer found the treatment was less successful. Dr. Woodward states that in many cases in which the paroxysms of epilepsy have recurred frequently they have, for months, been wholly suspended by use of tincture of stramonium. It rarely makes any favorable impression, unless it is used in sufficient doses to dilate the pupil of the eye slightly, and produce some difficulty of vision, more or less of the time.

Dr. Stillé says it is possible that a want of regularity and attention in administering the medicine may account for its failure in epilepsy when used by other physicians, for in the observance or neglect of these elements of treatment lies the secret of a thousand conflicting reports of the virtues of remedial agents.

[*To be continued.*]

Hydrastin and Leptandrin in Biliary Derangements, &c.

By R. J. HEMSTREET, of Poland, N. Y.

I HAVE, for the past two years, been in the habit of prescribing the following formula in biliary derangements, with great success:—

R.—Hydrastin,	-	-	-	-	-	-	gr. j.
Leptandrin,	-	-	-	-	-	-	grs. ij. to iij.
Podophyllin,	-	-	-	-	-	-	grs. ss. to j.
Sub-Carb. Soda,	-	-	-	-	-	-	grs. ij. to iij.

To be taken once in four hours, until free catharsis is obtained, or, where the case is not urgent, one at bed-time, and in case it should not operate freely by morning take another.

In dyspeptic cases, I have found the following preparation to act beautifully as a laxative:—

R.—Leptandrin,	-	-	-	-	-	-	grs. iij.
Calcined Magnesia,	-	-	-	-	-	-	grs. v. to vi.

To be taken at bed-time. It acts gently, producing no uneasiness, at the same time corrects acidity.

I had a severe case of dyspepsia last spring and summer. It had been of long standing, and the patient was greatly emaciated, being unable to retain scarcely any food upon the stomach, with great torpor of the bowels. I put her upon the above formula, as a laxative, administering through the day the following:—

R.—Hydrastin,	-	-	-	-	-	-	gr. j.
Sub-Carb. Soda,	-	-	-	-	-	-	grs. ij.

To be taken before each meal—quieting the nervous system with a pill of equal parts of Tilden's extract of valerian and symplocarpus foetidus.

She is now able to eat and digest a good meal of beefsteak, good bread, potatoes, &c., and, so far as indigestion is concerned, she is quite well.

M. BEAN, an hospital physician, of Paris, has found that workmen who handle lead do not suffer from phthisis, and that the progress of this disease has been stopped by symptoms of lead poisoning.—*Southern Med. and Surg. Journal*.

Podophyllin and Leptandrin as a Substitute for Mercurials in Diseases of the Digestive Organs.

By JARED P. KIRTLAND, M. D., of Cleveland, Ohio.

Habit, and occasionally a favorable result, too frequently establish the use of mercurials as a routine in disorders of the digestive system, embracing the liver, stomach, alimentary canal, and to some extent the whole glandular structure.

That those preparations are often the most certain and potent means for correcting such disorders, is not to be denied; and I most certainly shall not assume the province of the professional demagogue to decry their use. It should, however, be recollected that the best of remedies, injudiciously employed, will establish factitious disease, and that very many cases of hepatic and digestive derangements, organic and functional, can be traced, for their origin, to an indiscriminate or too long-continued use of mercurials.

Such practice is liable to result in establishing an artificial action, which can only be sustained by a repetition of the same course of means. This artificial condition becomes as imperative in its demands for repetition as does the abnormal thirst for alcohol with the inebriate.

For the practitioner to be able to avoid such evils is a desideratum which I hope and believe to be attainable.

During the last two years I have, in a great measure, dispensed with the use of calomel and blue mass in diseases of the afore-named system, and have substituted therefor a combination of the resinoids of two indigenous plants, to wit: *podophyllum peltatum* and *leptandra virginica*.

The former of these has long been known in popular practice as the May-apple or mandrake, and its medicinal virtues have, perhaps, been more correctly estimated by irregulars than the regular profession.

Standard authors who have noticed it have copied, one from another, a tissue of errors in regard to its properties, till it is now generally considered to be a mere drastic cathartic, resembling jalap in its action. Experience has demonstrated to me that in moderate and suitable doses it is not drastic, but operates mildly, extensively, and equally on the whole alimentary canal; at the same time it is as certain to reach the liver and bile-cyst as is an equivalent dose of calomel, without inducing the sickness and depression which often attend the use of mercurials under such circumstances.

The brief treatise on this vegetable, in Wood & Bache's Dispensatory (8th edition), pages 556, 7 and 8, contains some valuable truths, with at least an equal amount of error. The reputation of the *podophyllum* has been established by its abuse rather than judicious employment, a matter to which I shall again refer.

The latter, the *leptandra virginica* of modern botanists, was formerly known as the *veronica virginica*, and in domestic medicine as the colored physic root. I frequently prescribed it, forty years since, and more frequently

observed its effects employed as a laxative and cathartic, as it then was extensively used by mothers and nurses in bowel complaints of children. It seemed in its impression to resemble somewhat ipecacuanha when administered in small and repeated doses; perhaps less nauseating and diaphoretic, and more laxative.

Both of these plants when prescribed in the form of either decoction or powder of the roots are objectionable, tending to offend the stomach: more from the stimulus of quantity than any medical quality. Modern chemistry and pharmacy have, however, obviated this objection, by furnishing their active principles in a concentrated form, which can be used in doses so small as not to offend the most sensitive stomach, and at the same time as powerful as the case requires.

My usual prescription for a laxative and aperient, as an equivalent for one or two grains of calomel or five grains of blue mass, is the following:—

R.—Podophyllin,

Leptandrin,.....aa. gr. x.

Mix thoroughly; divide into forty powders. Dose, one powder at bedtime; repeat as occasion may require.

Ale, coffee, or catawba wine forms a convenient and palatable vehicle.

The combination of these two articles was first suggested to me by my friend H. B. Wilcox, M. D., of La Porte county, Indiana.

It will not be attempted in this communication to specify all the various morbid conditions of the human system in which the above prescription may be employed, nor the modifications and combinations with other agents that may be resorted to by the skillful practitioner to meet individual cases. All this he will readily discern from his knowledge of general principles.

The term *desobstruent*, to designate a class of remedies, is obsolete, yet the above combination of active medicinal principle seems in practice to entitle it to a place under such a head. It is milder, and at the same time more certain to bring into a healthy and active operation every part of the glandular system than any means of my acquaintance. Hence its use is readily suggested in deficient or vitiated secretion of the liver, kidneys and uterus, with their associated morbid conditions.

A caution in regard to the dose of these agents, either single or combined, experience shows us to be requisite. On a recent occasion, an intelligent physician was condemning the podophyllin as a harsh, drastic and irritating cathartic. The query was put to him, "In what dose do you administer it?" The reply was, "About two grains; but I do not trouble myself to weigh such articles."

Dr. Zimmerman's chapter "On False Experience in Medicine" is invaluable. It might be extensively illustrated with instances like the above.

One grain of opium is a safe narcotic for an adult requiring such an article; but eight grains would destroy the same individual.

One-fourth of a grain of podophyllin, mixed with an equal amount of lep-

tandrin, is a full dose for a laxative, but if multiplied by either four or eight, the remedy becomes drastic, harsh and irritating.

Then, again, the practice of portioning out by the eye these potent agents is unsafe: The eyes, fingers, and judgment of the most experienced may err; but his well-balanced scales, like figures, will not deceive.—*Cleveland Medical Gazette.*

Veratrum Viride in Cases of Children.

By E. J. OLIVEROS, M. D., of Glasgow, Ga.

The propriety of using tincture of veratrum viride, in cases of children under two years old, is a question that has long been mooted by professional characters; and at the present day, at least in this section of Southwestern Georgia, when the action of that medicine is urgently and strenuously called for, the parents tell you that Dr. so-and-so says it is certain death when given to children, indiscriminate of age.

Let their assertions be as they may, practical experience has proven to the contrary.

For the past few years I have had numerous cases among children with which to contend. Some of them were of a highly inflammatory type, with the pulse ranging from 150 to 160, and the most certain remedy I have ever tried in controlling the excited circulation was the tincture of veratrum viride. It did not only quell the agitated pulse, but it most generally checked the disease in its very commencement.

I have had considerable experience in the administration of tincture of digitalis in inflammatory diseases, with very beneficial results, but yet I cannot speak with as much confidence of the latter medicine as I can of the former.

The tincture of veratrum viride, I must confess, should be given with discretion and much discriminating judgment.

It is a powerful remedy, and should be used by those only who are fully informed as to its effects. What is potent for good is also potent for evil.

Oftentimes these powerful medicines fall into the hands of charlatans and empirics, who, laboring under the vain delusion that capital may be made under the fictitious name of some nostrum, they possessing as little judgment as brains, give it until complete prostration takes place; the pulse falls to an almost inappreciable low number of beats; coma supervenes, and the result is death.

I think our medical code, as well as legal statutes, should make suitable provisions for such impostors, who, under the garb of philanthropy, lurk about, and by smooth parleying and bombastic language lead the credulous and uninformed astray.

In the administration of tincture of veratrum viride there is a peculiarity that I have not seen noticed by any of our writers. It is this: When the

pulse of an infant ranges from 150 to 160 beats to the minute, and the veratrum is administered in doses according to the age and idiosyncrasies, very frequently the pulse does not lessen in frequency; the patient becomes pale, with flabby muscles, and with a profuse perspiration. It is then the inexperienced becomes alarmed, and believes his patient is tending to fatal collapse. And just so would it be were not the proper counteracting remedies given. While you will observe all these dangerous symptoms supervening, pulse quick, &c., &c., you will discover that its volume is measurably lessened, and now is your time to administer some stimulant, such as brandy or syrup of ginger; I prefer the brandy. Give it in small doses, at intervals of from three to five minutes, until you perceive a change in the pulse.

Under such treatment, you will find the pulse lessening in frequency and increasing in volume, fever subsiding, all symptoms assuming a favorable tendency, and your patient getting better. I have experienced this beneficial action so often, that I rely with great confidence on the use of tincture of veratrum viride in cases of children suffering from inflammatory affections, more especially pneumonia.

I would reiterate, however, that this medicine should always be administered under the advice or supervision of a physician.—*Oglethorpe Medical and Surgical Journal*.

Extract of Hemlock (*Conium Maculatum*) in the Treatment of Gonorrhœa.

By A. H. STEPHENS, M. D., of Camden, Ohio.

I am induced to give the public, through your columns, my experience in the use of that very old remedy, hemlock, in the treatment of that very unpopular (in this locality at least) disease, gonorrhœa! hoping that some of those more favorably located, more familiar with the disease, and, of course, better qualified than myself, may be led to investigate and report the result of such investigation, that the profession at large may become better acquainted with the therapeutic properties of this very important remedy.

Case 1.—B—, aged 27; of sanguineous temperament. Applied Feb. 2d, three days after a suspicious intercourse. Complains of burning and pain in micturition; some tenderness of testicles. Running the finger along the urethra, from perineum to the glands of the penis, I forced out about half a teaspoonful of thick yellow pus, characteristic of gonorrhœa. Directed

R.—Potassæ bitart.,..... ℥ ii.

Potassæ nit.,..... ℥ ss.

Ant. et pot. tart.,..... gr. ii. M.

Sig. Take a teaspoonful three times a day. Use argent. nit., gr. ii.; aque, f ℥ i., as a wash for the urethra.

The medicine produced free purging, considerable nausea, and in four days reduced somewhat the acute symptoms, changing the discharge to a thin, transparent fluid, moderating the pain and frequency of micturition. He was then placed on the usual "teaspoonful three times a day" of copaiba emulsion, which he used for ten days, without any amelioration of his "troubles," save a thickening-up of the discharge to about what it was at the commencement of the disease. At this time my attention was called to a communication of Dr. Staats, of Albany, recommending the hemlock, and I determined to test it in this case. He accordingly took ext. conii. ʒii., divided into twenty pills—two every two hours, discontinuing the local wash of nit. argent. In forty-eight hours the discharge diminished one-half; but the giddiness and distress complained of induced me to reduce the dose one-half, which he continued taking for two days more, when the discharge ceased, and the urethra appeared perfectly clear of inflammation. And now, three weeks after discontinuing the medicine, he says he has no trouble whatever, and is perfectly well.

Case 2.—H—, aged 40. Applied three weeks ago. A case of ordinary gonorrhœa. Had been using for a week previous to applying copaiba and cubebs, with injections of zinc and morphia, without any benefit. I placed him at once on the use of gr. xii. ext. conii every two hours, discontinuing all other medicines. In three days the discharge diminished materially, and in five days the man reported himself entirely well.

Case 3 was a case of rather more than an ordinary amount of inflammatory symptoms. After a free purging with calomel and compound powdered jalap, he was given the ext. conii, in the usual dose of gr. xii. every two hours. The discharge diminished gradually from the first day until the sixth, when the patient was perfectly cured.—*Medical and Surgical Reporter.*

Iodide of Potassium in the Treatment of Iritis.

By J. C. WORSWORTH, Esq., Asst. Surg. Royal London Ophth. Hospital.

An extensive trial of iodide of potassium has led me to the conviction that a safe and speedy cure of iritis can generally be effected by it alone; but it must be admitted that instances occur, now and then, that resist its influence, and can only be subdued by the administration of mercury in addition. On the other hand, it may be safely stated that a combination of both will often accomplish a cure in less time, and at less sacrifice, than either mercury or iodide of potassium alone. I have known iritis occur when the patient has been under the specific action of mercury, and at once subside on giving the iodide of potassium. In other cases, the disease has appeared during a course of the iodide, and succumbed to mercury. I have, therefore, been led to adopt the plan of combining the two remedies, when I have found that either does not quickly produce the desired effect. It has occasionally happened

that a considerable augmentation of pain has ensued on the use of the iodide; and in other instances, where it alone has been adopted, though all the other symptoms of the disease have rapidly subsided, the impairment of vision has continued for some time: under these circumstances I have administered a few doses of mercury, with decided advantage.

As a matter of experience, as well as of theory, I should be indisposed to trust to the iodide alone, when the exudation exhibits a tendency to organization by assuming the nodular form, or by closing the pupil, and so leading to synechia or opaque capsule. Perhaps, too, as a rule, its sole use should not be adopted, if possible, when vision is from the outset of the attack much compromised.

I have observed, on many occasions, a decided advantage follow its use, when the skin has quickly become affected by scaly or papular eruptions.

On the other hand, it has seldom succeeded if there has been much prostration of strength or syphilitic cachexy; and in rheumatic iritis, bark and soda, or quinine, will be generally more efficient when the disease is associated with debility.

In conclusion, then, I believe that the iodide of potassium cannot supersede mercury in the treatment of iritis, though it affords an excellent substitute in cases for which mercury is not admissible, either through some idiosyncrasy of the patient, or when the specific influence of the mineral has been already attained; that in others its combination with mercury will greatly expedite the recovery, and save the patient from the necessity of such a prolonged course of mercury as would seriously compromise the general health; and, lastly, that in a large proportion of these cases the iodide will of itself suffice to effect a cure, especially when assisted by leeching and blisters.—*Medical Times, and North Amer. Med. Reporter.*

A Botanic Garden Near Philadelphia.

A few weeks ago, in referring to the obligations under which the public lay to medical men, not only for the establishment of benevolent institutions, but also for those designed to advance the arts and sciences, we spoke of the Polytechnic College and its founder, our townsman, Dr. A. L. Kennedy. We are happy to announce that the same gentleman has prepared a bill, which has received the sanction of the Legislature and State Executive, and become a law, whereby a botanic garden is to be added to the other scientific attractions of Philadelphia and vicinity. The bill incorporates a company with a capital of \$50,000, to be divided into a thousand shares of \$50 each, and confers upon the corporators all needful powers for "the ownership and establishment of a model farm and botanic garden, and for the proper management and maintenance of the same."

Upon the model or experimental farm are to be determined and illustrated, by carefully conducted experiments, "the relative adaptedness of soil to crop,

the best methods of cultivation, the worth to stock, of different varieties of food and methods of feeding, the comparative value of breeds of stock, and the means of preventing and treating their diseases." A limited number of agricultural students will be received on the farm, who, with the agriculturist at their head, will form one household, enjoying the accommodations and engaged in the pursuits of the diligent and intelligent country gentleman. The expenses of a faculty of science at the farm will be avoided under an arrangement with the Polytechnic College, by which the students at the experimental farm will be admitted to the lectures, practical laboratory instruction, and all the scientific privileges of the college, in the forenoon, on several days in the week, returning by railway to the farm in season for dinner.

The botanic garden will comprise hot-houses, green-houses, and "an extensive and scientifically classified collection of growing plants," and will also be used in testing the "practicability of acclimating useful and ornamental foreign plants." Dr. Kennedy, who was a pupil of the younger Jussieu, and a companion of that distinguished botanist in his herborizations, formerly gave, with each returning spring, a course of lectures on botany, to medical students in this city. We hope to see such a course revived this season, as the science should form an important part of the education of every physician. We, moreover, feel assured that medical plants will occupy their proper and prominent position in the botanic garden, and that every facility will be afforded whereby medical students may avail themselves of its advantages.—*Phil. Med. and Surg. Reporter.*

Selections.

TURPENTINE IN HÆMOPTYSIS.—There are several well-known remedies which justly enjoy a high reputation for arresting attacks of hæmoptysis, and amongst them may be mentioned acetate of lead, gallic acid, and dilute sulphuric acid. These we see commonly employed, and almost invariably with success. From some cause or other, however, they will sometimes fail, and our reliance must be placed upon some other astringent and styptic, which shall have the power of effectually checking this slow form of bleeding from the lungs. The oil of turpentine is, perhaps, one of the best, next to those we have mentioned, and when properly administered can be relied upon. We lately observed two cases of hæmoptysis in the Charing-cross Hospital, under Dr. Willshire's care, which continued obstinately persistent, in spite of the free use of acetate of lead firstly, then gallic acid, and thirdly dilute sulphuric acid. One patient was a young man, aged twenty-one years, who has had several recurring attacks of this symptom; he was admitted on the 28th of November. The hæmorrhage was stopped only when the oil of turpentine was administered in doses of twenty-five drops three times a day, in a little syrup and water. The other patient was a female, at first in the surgical wards under Mr. Hancock's care; she had had a breast amputated, which was followed by intense con-

gestion of the lungs, with hæmorrhage. She was now transferred to Dr. Willshire's care, and after taking the other remedies in full doses without effect, the turpentine completely controlled the bleeding, and she is gradually improving. The efficacy of turpentine is well-known in hæmorrhages from the urinary passages, and also from the uterus—that is to say, in their passive form; and as it exerts a specific and peculiar influence upon mucous surfaces generally, we may look for good results in other parts of the body, of which the bronchi are most certainly not the least important.—*London Lancet*.

REMARKS UPON THE MEDICINAL PROPERTIES OF THE BLACKBERRY ROOT.—

The blackberry root has been long employed in both professional and domestic practice as a remedy principally in disorders of the bowels. Dr. Cyrus S. Sneed, of Culloden, Ga., in a short article in the *Southern Medical and Surgical Journal*, speaks of its remedial virtues. Dr. Sneed thinks that it is an error to suppose that its usefulness in disorders of the bowels depends principally upon the tannic acid it contains. He believes that its most powerful effects in those affections are attributable to the bitter stimulant or tonic extract, distinct from its astringency, the latter having no more effect than ordinary vegetable astringents. "In order to obtain this extract separate, the root when taken from the earth should have its bark immediately grated, and cold water applied to it. Like a great many other vegetable astringents, in this process tannic acid is retained in the bark, whilst the bitter principle is extracted by the water. * * A small quantity of this fluid taken into the stomach increases the appetite, and, at times, I find, produces a glow over the surface of the body, which induces me to believe that its therapeutic action is stimulant rather than tonic, as stated by most authors. I have found this preparation to produce some of the most extraordinary cures in chronic diarrhea and dysentery, and even in cases where all other remedies failed, and in the shortest possible time. The remedy prepared according to the method prescribed above has a decided advantage over the astringent preparation of the same root. The latter should be used with the greatest caution, lest, by suddenly checking the discharge from the intestines, anasarca be produced. The remedy, prepared as proposed above, should be given in small doses, five or six times a day. There is hardly any danger of its producing costiveness."—*Journal of Rational Medicine*.

INJECTION OF THE SULPHATE OF ATROPIN ALONG THE TRACK OF THE PNEUMOGASTRIC NERVE IN ASTHMA.—The *Maryland and Virginia Med. Journal* quotes the following from the *Moniteur des Sciences*:—"The last Paris novelty consists in this treatment, by M. Courty, of the paroxysms of asthma in a case which had resisted a great variety of medicinal agents. He injected along the track of the pneumogastric nerve, on the inner side of the sterno-cleidomastoideus and on a level with the thyroid cartilage, six drops of a solution of the sulphate of atropin, which produced vertigo, dilatation of pupil and other symptoms of narcotisation. Next day the injection was repeated on the other side, and thrown in more deeply, with the effect of producing still

greater, though not alarming narcotism. A third injection, two days after the last, completed the treatment—the asthma having gradually diminished, and now, four days after the first injection, entirely ceased. The patient (a lady, aged fifty-four), continued quite well two months after the treatment had been put in force.—*St. Louis Med. and Surg. Journal*.

OPIMUM AN ANTIDOTE FOR BELLADONNA.—Dr. Lopez, of Mobile, mentions in the *N. A. Medico-Chirurgical Review* a case of poisoning from belladonna, successfully and speedily relieved by opium—thus showing the complete antagonism of the two poisons. The suggestion was derived from the practice of Dr. Graves, of Dublin. When belladonna is freely used its toxic effects are not uncommon, and it is important to bear in mind this simple antidote.—*Ibid*.

ATROPIN IN EPILEPSY.—Dr. Maresch, physician to a lunatic asylum in Virginia, states in the *Medical Times and Gazette* that he succeeded admirably in the treatment of epilepsy with atropin. Of eight females three were cured entirely, and the condition of the remaining five greatly improved. Other statistics equally favorable are given. One-fifteenth of a grain of this remedy produces dryness of the throat, difficulty of speech and aberration of vision—some idea of the dose may be gathered from this.—*Ibid*.

CHLOROFORM AS A HYPNOTIC.—Opium and lactucarium are almost the only two agents which induce sleep by a special sedative action; and they both have their inconveniences as well as their highly valuable properties. A hypnotic without these inconveniences would prove an agent of great value, and M. Fonssagrives, of Cherbourg, believes that chloroform is that agent, judging from his having used it with constant success since 1854, when it was recommended by Dr. Uytterhaven, a Belgian practitioner. Sleeplessness arises from different causes—sometimes it is the result of the persistence of a painful symptom which forcibly excludes repose; at others it constitutes an entirely nervous symptom originating in some moral sufferings, absorbing pre-occupation, or too prolonged or too active intellectual exertion; while at other times it proceeds from a vicious habit of the cerebral centre becoming a cause of sleeplessness; or finally, the sleeplessness may result from the abuse of hypnotic remedies, or may be an epiphenomenon of certain acute diseases. It is in these latter cases that chloroform is of especial service. The dose is small but effectual, viz: from five to ten drops.—*Bulletin de Thérap.*

TREATMENT OF TRAUMATIC TETANUS BY APPLICATION OF ICE TO THE SPINE.—Dr. B. B. Carpenter, of Suffolk county, N. Y., states that in 1833 he published two cases of traumatic tetanus successfully treated by ice, and that since that time he has similarly treated fourteen cases with like result, except in one instance. His cases occurred in persons of good constitution and temperate habits. As specimens of the results of his treatment in the sixteen cases, he now publishes two examples, one of the acute and the other of the chronic form of traumatic tetanus. It is a common and fatal disease during the warm months in the part of the country where he lives.—*N. Y. Journal*.

P h a r m a c y .

EFFERVESCENT SOLUTIONS OF CITRATE OF MAGNESIA.

Messrs. Vuafart, Dalpiaz and Lefort have reported to the Paris Pharmaceutical Society on the above subject. They propose solutions of five different strengths, prepared from citric acid and carbonate of magnesia, in the proportions respectively of 19: 12—25: 16—28: 18—32: 21—36: 24 grammes, which will form lemonades containing respectively, 30, 40, 45, 50 and 60 grammes of crystallized citrate of magnesia. The *modus operandi* is copied from Mr. Lalouet, and is as follows:— $3\frac{1}{4}$, $4\frac{1}{4}$, $4\frac{1}{2}$, $5\frac{1}{4}$, or $6\frac{1}{4}$ drams of carbonate of magnesia, according to the strength intended for the solution, are rubbed up in a porcelain mortar with a twenty-fold weight of water, and poured in a mineral-water bottle; the acid in the respective proportion of 3, $4\frac{1}{4}$, $5\frac{1}{4}$, $6\frac{1}{4}$, or $7\frac{1}{4}$ drams is added in crystals, the bottle well corked and tied over, and set aside for from six to ten hours. After that time the magnesia will have been taken up, though a slight cloudiness renders filtering advisable; therefore the solution of citrate of magnesia, which is strongly impregnated with carbonic acid, is filtered into another bottle (citrate-bottle), in which are two drams of citric acid in crystals, and two ounces of some flavored syrup. The acid crystals are prevented from mixing with the filtered solution by the syrup, which latter must *not* have been clarified with white of egg. The bottle is finally filled with water in the usual manner, corked, and tied over. These lemonades are said to keep for some months without precipitation.

—*Druggists' Circular*.

CHLORODYNE:

ITS HISTORY, PREPARATION, PROPERTIES, THERAPEUTIC EFFECTS, DOSES, &c.

History.—Chlorodyne was invented in the year 1848 by Dr. Browne, whilst officiating in his medical capacity during the prevalence of cholera and diarrhoea amongst our troops in India, and was introduced to the notice of the faculty in this country by him as “combination of perchloric acid with a new alkaloid.”

Preparation.—From Dr. Ogden's analysis it appears to be composed as follows:—Chloroform, six drams; tincture of capsicum, half a dram; oil of peppermint, three drops; muriate of morphia, eight grains; perchloric acid, twenty drops; Steele's hydrocyanic acid, twelve drops; tincture of Indian hemp, one dram; treacle, one dram. Dissolve the morphia in the perchloric acid; then add the tincture emp., capsicum, peppermint, and chloroform, and lastly the treacle and prussic acid.

Properties.—Chlorodyne is a volatile liquid, possessing a pungent smell and taste. It is soluble in alcohol, but insoluble in water; but may be conveniently administered in that liquid by suspending it in a little mucilage. The alkalies and alkaline salts decompose it. In color it is dark brown, and in

weight equal to twice its bulk of water. It is anodyne, sedative, diaphoretic, astringent, antispasmodic, diuretic, &c. Unlike the preparation of opium it does not produce headache, giddiness, prostration of strength, nor stupor; but in large doses, and from a constipated state of the bowels, it is liable to produce nausea, which in the former case may be relieved by a small dose of *sal volatile*, and in the latter by recourse to aperients.

Therapeutic Effects.—The changes produced by this preparation on the system are: first, a gentle heat at the stomach, followed by a general glow and total absence of pain; second, a calm and refreshing sleep; and third, an increase in the pulse, from a "small, weak, thready, hurried, or bounding one to a full, yielding, elastic, natural sort of one, decreasing in frequency of beats as well as resistance to a healthy condition."

Of its powers in the cure of consumption Dr. Stonehouse remarks:—"The cases (among others) in which I have employed it have been twelve cases of phthisis; eight of these patients have been examined by other medical men, and had been regarded as genuine cases of consumption, so that the nature of the disease does not rest upon my testimony alone. They were all well-marked cases; for I do not mention several others in an incipient stage. Two of the cases were in the last stage—*i. e.*, cavities had formed in the lungs; two others were bordering upon this stage. The remaining eight were in the second stage, that of softening; in five of these hæmoptysis was a prominent symptom. All these cases have done, or are doing, exceedingly well. Five of them have quite recovered; the others, with one exception, are in a fair way towards recovery."

Doses.—The dose of this preparation must be regulated according to the nature of the complaint. As an anodyne for febrile, inflammatory, or neuralgic affections, the dose is from ten to thirty drops; diaphoretic in cases of coughs, colds, &c., ten to twenty drops; sedative in consumption, &c., twenty to fifty drops; antispasmodic in gout, rheumatism, &c., twenty to forty drops; astringent in cholera, diarrhea, &c., fifty to one hundred drops. It is best administered on lump sugar, and given at intervals from every half hour to every four hours.—*London Chemist and Druggist.*

ELECTUARY FOR RHEUMATISM.

By J. C. C. Blackburn, M. D., of Morgan, Calhoun County, Ga.

R.—Pulv. cinchona,.....	3 ℥j.
Pulv. gum gualacum,.....	3 i.
Cream tartar,.....	3 i.
Flowers sulphur,.....	3 iv.
Pulv. ginger, rad., (or African pepper, 3 ℥j.).....	3 i.
Syrup,.....	q. s.

Dose: one teaspoonful three times a day, or enough to keep the bowels gently open.

This has been advantageously employed in chronic rheumatism and amenorrhœa.

GLYCEROLE OF LEAD.

The following is suggested as a substitute for Goulard's cerate. This cerate, as is well known, becomes speedily rancid, and in that state is more irritating than soothing to inflamed surfaces. The substitute does not change, is easily washed off with water, and can be reduced to any desired extent, for the purposes of a wash, with rose or distilled water:—

Pure glycerine,.....	13½ oz. (fluid).
Solution of sub-acetate of lead,.....	2½ oz. “
Camphor,.....	1 dram.

Triturate the camphor into powder, with a few drops of alcohol; add the glycerine; heat in a water-bath until the camphor is dissolved; when cool add the solution of lead, and shake well together. These proportions are those for Goulard's cerate, substituting glycerine for the oil and wax.—*Journal and Transactions of the Maryland College of Pharmacy.*

PERSULPHATE OF IRON AS A HÆMOSTATIC.

M. Monsel, of France, first proposed the use of this excellent hæmostatic, and as its use is becoming more general, we give our readers *his* process for its preparation:—

“Place in a porcelain capsule 100 grammes of distilled water, and ten grammes of sulphuric acid; raise the mixture to the boiling point, and then add fifty grammes of proto-sulphate of iron. After complete solution of the latter, pour, in small quantities, into the boiling liquid, sixteen grammes of nitric acid at 35°. When the rapid discharge of orange-colored vapors has ceased, add, in portions, fifty grammes of the proto-sulphate of iron, the solution of which will produce again reddish flames, and will cause the excess of nitric acid to disappear. The volume of the liquid is then raised to 100 grammes by the aid of distilled water, cooled, and filtered.”

Monsel suggests that 100 grammes of this solution be treated with a few grammes of linseed oil, and that the mixture be shaken four times in twelve hours. There is thus obtained a perfectly neutral solution, having no nitrous odor, and susceptible of preservation for a very long time. The solution is limpid, of a very dark brownish-red, inodorous, and with an extremely astringent but non-caustic taste. It marks 45 degrees of the *pesc-sclé*. When concentrated by boiling it assumes the consistence of honey, and if in that condition it is spread in thin layers on plates of glass, and dried at a temperature of 100° Fah., it can be obtained in reddish-yellow scales, transparent, like those of the citrate and tartrate of iron.—*Journal de Phar. et de Chim.*, and *Boston Med. and Surg. Journal*.

CURE FOR WARTS OR EXCRESCENCES.—The bark of the willow tree, burnt to ashes, will remove warts or excrescences.

National Medical Convention for Revising the Pharmacopoeia of the United States.

THE fifth Decennial Convention for the above purpose met on Wednesday, May 2, at Willard's Hall, Washington City, at 10 o'clock A. M.

Dr. George B. Wood, President of the Convention of 1850, was called to the chair, and Dr. John C. Riley, of Washington, appointed Secretary *pro tem*.

Dr. THOS. MILLER, of Washington, moved that a Committee of five be appointed to nominate permanent officers of the Convention. This was carried; and Dr. Aiken, of Baltimore; Dr. E. R. Squibb, of New York; Dr. Bridges, of Philadelphia; Dr. Fuller, of Maine, and Dr. Thomas Miller, of Washington, were so appointed.

This Committee, having retired for consultation, returned and reported the following names:—

For President—Dr. George B. Wood, of Philadelphia.

For Vice-Presidents—Dr. Jacob Bigelow, of Boston; Dr. Edward Warren, of North Carolina.

For Secretary—Dr. Thomas Miller, of Washington.

For Assistant Secretary—Dr. John C. Riley, of Washington.

All of which were accordingly elected by the Convention.

On motion, a Committee on Credentials was appointed, consisting of Wm. Procter, Jr., of Philadelphia; Dr. Thomas Miller, of Washington, and Dr. Cutter, of Massachusetts.

This Committee reported the following delegates as present at the Convention, viz:—

From the College of Physicians and Surgeons of Philadelphia—Dr. Geo. B. Wood and Dr. Robert Bridges.

From the New York State Medical Society—Dr. Caleb Green and Dr. E. R. Squibb.

From the New York Academy of Medicine—Dr. E. R. Squibb.

From the College of Pharmacy of the City of New York—John Meakin and Wm. Hegeman.

From the Philadelphia College of Pharmacy—Wm. Procter, Jr., A. B. Taylor, and Edward Parrish.

From the Maine Medical Association—Dr. A. J. Fuller and Dr. H. T. Cummings.

From the Connecticut State Medical Society—Dr. Gurdon W. Russell.

From the Massachusetts Medical Society—Dr. Jacob Bigelow and Dr. Ephraim Cutter.

From the Jefferson Medical College—Dr. Franklin Bache.

From the University of Pennsylvania—Dr. Joseph Carson.

From the Medical Society of the District of Columbia—Dr. Thos. Miller and Dr. Wm. G. Young.

From the National Medical College—Dr. John C. Riley and Dr. M. S. Lincoln.

From the University of Maryland—Dr. Wm. E. A. Aiken.

From the Maryland College of Pharmacy—Alpheus P. Sharp.

From the United States Army—Dr. Lewis A. Edwards.

From the United States Navy—Dr. George Clymer.

The report of the Revising and Publishing Committee, appointed in 1850, was read, and referred to the Committee on Auditing Accounts of the Secretary and Assistant Secretary.

It was, on motion, resolved that such members of the two houses of Congress as are medical graduates be invited to attend the Convention and participate in its deliberations.

The delegates of several medical bodies represented in the Convention were then called on for contributions towards a revision of the National Pharmacopœia, when reports were handed in from the Massachusetts Medical Society, by Drs. Cutter and Bigelow; from the New York State Medical Society, by Dr. Squibb; from the New York Academy of Medicine, by the same; from the New York College of Pharmacy, by Wm. Hegeman, and from the Philadelphia College of Pharmacy, by Wm. Procter, Jr.

Dr. PARRISH presented a report from the American Pharmaceutical Society, a body not incorporated and not represented in this Society; which was received.

These reports were referred to a Committee, with directions to report a plan for the revision and publication of the Pharmacopœia; the committee to consist of Dr. Franklin Bache, Dr. Edward Parrish, Alpheus P. Sharp, Dr. Thomas Miller, and George W. Russell of Connecticut.

The Convention then adjourned to Thursday, at 11 o'clock.

SECOND DAY.

At 11 o'clock, the chair was taken by Dr. Geo. B. Wood, of Philadelphia, the President of the Convention.

The minutes of the meeting of the preceding day were read by Dr. THOS. MILLER, the Secretary.

Mr. PROCTER, from the Committee on Credentials, reported the presence to-day of the following gentlemen, additional to those present yesterday:—

From the Delaware State Medical Society—Dr. F. H. Askew.

From the Maryland College of Pharmacy—Mr. George W. Andrews.

From the Massachusetts College of Pharmacy—Messrs. Charles T. Carney and Robert R. Kent.

From the New York College of Pharmacy—Alex. Cushman.

Dr. MILLER, from the Auditing Committee, stated that the report of the Revising and Publishing Committee appointed in 1850 had been examined, and found correct.

Dr. BACHE, from the Committee on a Plan for the Revision of the Pharmacopœia, brought in a report, comprising a series of resolutions, one of which

was that there should be a Committee of nine (Dr. Wood to be one) to revise and publish the Pharmacopœia; also, that three be a quorum, and that the place of meeting be in Philadelphia.

On motion of Dr. MILLER, the report was considered, resolution by resolution; and it was ultimately passed.

Mr. MEAKIM, of New York, moved that a Committee be chosen from each of the delegations present, to nominate eight members of the Committee on Revision and Publication of the Pharmacopœia.

Dr. MILLER moved to amend this, by making it a member from each State and Territory represented, viz: ten in all.

Dr. BACHE thought it best that the choice should be made so that several of the Committee should be residents in or near Philadelphia, where the meetings of the Committee are to be held.

Dr. ASKEW moved that the President directly appoint the Revising and Publishing Committee.

Dr. BACHE, with all confidence in the President, thought it would be best that the Committee be appointed by the States and Territories represented.

The President preferred to have nothing to do with this appointment, but that it be left altogether to the Convention.

The motion of Dr. Askew was put, and negatived; when

The motion of Dr. Miller recurring, it was put and carried unanimously.

On motion of Dr. BACHE, a recess of ten minutes, to confer with the President on the subject of appointing the Nominating Committee, was had; after which the meeting was resumed, and the Chair gave the names of the Committee.

Dr. CARSON moved a resolution of thanks to the Messrs. Willard, for putting their hall at the service of the Convention during its sitting. Passed unanimously.

On motion of Dr. BACHE, a Committee of five, to be appointed by the Chair, should be charged with the duty of reporting on a plan for organizing the next Convention of 1870.

The Committee thus constituted consisted of Drs. Bache, Squibb, Miller, Andrews, and Carson.

A recess of fifteen minutes was taken, to allow the two Committees to consult and report.

On coming again to order, Dr. ASKEW read the report of the Nominating Committee, which proposed for the Committee on Revision and Publication of the Pharmacopœia the following gentlemen:—

Dr. Franklin Bache, of Philadelphia; Dr. E. R. Squibb, of New York; Mr. C. T. Carney, of Massachusetts; Dr. Geo. B. Wood, of Philadelphia; Dr. H. T. Cumming, of Maine; Mr. Wm. Procter, of Philadelphia; Mr. Ira Carson, of Philadelphia; Mr. Wm. S. Thompson, of Baltimore, and Mr. Ira B. Taylor, of Philadelphia.

The report was accepted, and its nominations confirmed.

The Committee to make arrangements for the Convention of 1870 reported,

through its chairman, Dr. Bache, that the same rules as adopted in 1850 for the present Convention be taken, by simply changing dates.

This report was adopted.

Mr. WM. HEGEMAN, of New York, moved to ask an expression of the opinion of the Convention in reference to the subject of a bill now before Congress to provide for the greater security of the medical profession, and the public, in the matter of importation of drugs and medicines.

The PRESIDENT thought that though the subject mentioned by the gentleman was one of high interest and importance to the general profession, yet it would be better for the Convention to confine its deliberations to the specific matter which had called them together.

Dr. PARRISH thought that great praise was due to the New York College of Pharmacy for their action in reference to establishing standards for the strength and purity of drugs and medicines, but at the same time he deemed it not within the scope of the objects of the present Convention to interfere with the matter.

Mr. CARNEY, of Boston, thought the cause of pure drugs and medicines before Congress might be advanced by a simple expression of opinion by this body.

The PRESIDENT said that there would soon meet two bodies, the American Medical Association and the Pharmaceutical Association, for the consideration of whom the measure proposed would be altogether appropriate.

On motion of Dr. CARSON, several sections of the bill before Congress were read.

Dr. BACHE, whilst acknowledging the great importance of the matter, deemed it not germane to the objects of this Convention, and therefore moved to lay the subject on the table; which was accordingly done.

Mr. MEAKIM called the attention of the Convention to a proposition of the New York College of Pharmacy, which he embodied in a resolution, and moved—

That in the index of the Pharmacopœia, the syllables of both Latin and English names be so divided and accented that the index may also serve as a pronouncing vocabulary to the Materia Medica.

This subject was learnedly debated by Dr. Bache, Dr. ASKEW, and others; when

Dr. ASKEW moved to refer the subject to the Committee on Revision and Publication, to be acted on or not, according to its discretion.

On being put, this motion was lost by 9 ayes to 12 nays.

The resolution of Mr. Meakim was then put, and a new debate arose; when the resolution was carried by 12 ayes to 10 nays.

Mr. MEAKIM next called the notice of the Convention to its title of the "National Medical Convention," &c., &c., and moved to change to "The Pharmacopœia Convention."

Dr. BACHE proposed merely to strike from the present name the word "Medical;" which was put to the vote, and carried unanimously.

So the Convention will be called "The National Convention for Revising," &c., &c.

On motion of Mr. PROCTER, a contribution was then made by each of the members present to defray the expenses of the Convention.

The PRESIDENT took the opportunity to explain that the vote on the resolution of Mr. MEAKIM was merely a recommendation to the Committee on Revision and Publication, and not an instruction.

Mr. PROCTER spoke in favor of having a low-priced edition of the Pharmacopœia for more general distribution among pharmacutists, which would do much to insure uniformity of preparation of medicines, &c.

The subject was discussed by the President, Dr. Bache, and Mr. Procter, when the matter seemed to be remitted to the discretion of the Committee on Revision, who were stated by the President to be always anxious to furnish an edition at the lowest price at which it could be done.

Dr. PARRISH introduced the subject of uniformity of weights and measures by the medical profession and by the apothecaries of the country. He advocated making the avoirdupois ounce the standard weight, as was advocated in England.

The PRESIDENT thought the Convention could not discuss this subject with profit in the short time allotted to it.

Mr. MEAKIM thought it best to begin now, if anything was to be done in the future.

Dr. BACHE called up Mr. Taylor, of Philadelphia, who had written with much learning and effect on this subject.

Mr. TAYLOR then addressed the Convention in advocacy of abolishing the troy and avoirdupois scales now in use, and substitute the grain as the unit for all weights less than a pound avoirdupois—beyond that he would use pounds. He would also do away with the Roman symbols, and use the common Arabic figures. He thought this better than the plan now proposed in Great Britain.

Dr. SQUIBB read an extract from the united proceedings of the New York Academy of Medicine and the New York College of Pharmacy on this subject.

Dr. PARRISH advocated the abolition of the present anomalous weights, and was in favor of the avoirdupois ounce and pound.

Mr. PROCTER also favored the avoirdupois measure as the only one to be used.

Dr. BACHE thought it better, for the sake of uniformity, to wait the action of the British Commissioners on the subject of the consolidation of the London, Edinburgh, and Dublin Pharmacopœias into a British Pharmacopœia. He was himself against changing the troy grain, and hoped the British Commissioners would not. He preferred the French system of *grammes* and *centigrammes*, doing away with *decigrammes*; but as there was little hope of this system being adopted in Great Britain, it would be best to wait and see what was done there before we act.

Mr. MEAKIN advocated the "grain" standard.

Dr. PARRISH preferred the ounce.

Mr. PROCTER said that even in France now, in many of their, best works on pharmacy, they reject the decimal division, and go back to the old ante-revolutionary measures.

The subject of weights and measures was then dropped.

After a vote of thanks to the President, the Secretary, and Assistant Secretaries, the Convention adjourned *sine die*.

Editorial.

NATIONAL MEDICAL CONVENTION FOR REVISING THE PHARMACOPOEIA OF THE UNITED STATES.—We publish this month the proceedings of this important Convention, which convened on the 2d of this month at Washington, D. C., and are indebted to the *National Intelligencer* of that city for a report of its proceedings.

The labor of revision has been committed to a Committee, to whom are referred the contributions and reports of the several Societies, as well as all papers having reference thereto. This Committee will publish the work as soon as their labors are concluded, awaiting its final completion for the publication of the British Pharmacopoeia, which is soon expected to appear.

It is the intention of the Publication Committee, we believe, to publish an edition at a low cost, to enable all who ought to possess this work to do so, as many go without it rather than pay a high price.

The Committee of the Philadelphia College of Pharmacy have recommended the following changes, among others:—

New Preparations.

Acetum Iobellæ,	Emplastrum Picis Canadensis,
“ Sanguinarie,	“ Plumbi Fuscum.
Acidum Chromicum,	Extractum Arnicæ,
“ Phosphoricum Dil.,	“ Digitalis,
“ Valerianicum,	“ Colocyntidis,
Æther Fortior,	“ Senegæ,
Spiritus Chloroformi,	“ Valerianæ,
Alumina Sulphas,	“ Ignatiæ,
Ammonia Phosphas,	“ Aconiti Radicis Fluidum,
“ Valerianæ,	“ Buchu Fluidum,
Aqua Crocæti,	“ Cimicifugæ Fluidum,
“ Auranti Flores,	“ Cinchonæ Fluidum,
Atropa,	“ Conii Fluidum,
Atropiæ Sulphas,	“ Colchici Fluidum,
Bismuthi Carbonas,	“ Dulcamaræ,
Cadmii Sulphas,	“ Ergotæ Fluidum,
Calci Phosphas Precipitatus,	“ Gentianæ Fluidum,
Ceratum Extracti Cantharidis,	“ Geranii Fluidum,
Cinchonæ Sulphas,	“ Glycyrrhizæ Fluidum,
Emplastrum Arnicæ,	“ Hyoscyami Fluidum,
“ Conii,	“ Ipecacuanhæ Fluidum,

Extractum Kramerie Fluidum,
 " Lobelie Fluidum,
 " Pruni Virg. Fluidum,
 " Podophylli Fluidum,
 " Scillas Fluidum,
 " Serpentarie Fluidum,
 " Spigelle Fluidum,
 " Taraxaci Fluidum,
 " Uva Ursi Fluidum,
 " Veratri Vir. Fluidum,
 " Zingiberis Fluidum,
 Liquor Chlorinili,
 " Ferri Tersulphatis,
 " Ferri Citratis,
 Ferri et Alumina Sulphas,
 " Ammonie Citras,
 " Ammonie Tartras,
 " Quinine Citras,
 " Strychnie Citras,
 Ferri Sulphas Exsiccato,
 " Valerianae,
 Oleum Tanacetil,
 " Erigeronis,
 Pulvis Rhei Compositus,
 " Sodae Effervescentes,
 " Aperientes Effervescentes,

Quinine Valerianae,
 Resina Jalapee,
 " Podophylli,
 " Scammonii,
 Santoninum,
 Liquor Sodae,
 Sodae Chloras,
 " Valerianae,
 Spiritus Cinnamonii,
 " Limonis,
 Strychnie Sulphas,
 Syrupus Rosae Gallicae,
 " Rubi Radicis,
 Tinctura Arnicee,
 " Cannabis,
 Tinct. Capsici et Myrrhæ,
 " Cinchonæ Ferratæ,
 " Ignatiæ,
 " Opii Deodorata,
 " Rhei Aromatica,
 " Veratri Viridis,
 Trochisci Cubebeæ,
 " Ferri Carbonatis,
 " Zingiberis,
 Unguentum Adipis,
 Zinci Valerianae.

Preparations Expunged.

Ferri Iodidum,
 Pil. Ferri Iodidi,
 " Ferri Compos.,
 " Galbani Comp.,

Spongise Utræ,
 Tinct. Cinnam. Comp.,
 " Rhei et Gentiane.

HYDRASTIN IN CATARRHAL OPHTHALMIA.—Dr. R. R. Stevenson, of Reeds-ville, Ind., communicates to us the following:—

"I have been using an ointment made of your 'hydrastin,' and mutton suet, in a great many cases of catarrhal ophthalmia, with great success—a disease that has been very prevalent in this State and Illinois for a great many years, caused, according to my view, by a humid atmosphere and heavy north-west winds in the autumn and spring. The following is my formula for preparing it:—

"R.—Adeps ovillus,..... 3 ss.
 Hydrastina (alkaloid),..... gr. ij.
 Venice turpentine,..... gtt. iv.

M. ft. ung. Apply to the eyelids night and morning.

"I have also succeeded in curing a great many cases of chronic inflammation of the conjunctive with the above preparation. I have used the golden seal, with very happy effects, in gonorrhæa, gleet, and other diseases of the urinary organs, depending on an increased action of the mucus membranes."

LADIES' SLIPPER.—Dr. Simms, of Wilmington, Del., says:—"I have used fluid extract of ladies' slipper in several cases of mania-a-potu, with entire success. I prescribed one tablespoonful every hour until sleep was produced,

which was in twelve hours, continuing it in smaller doses until the patient was well. There was no stupor on waking, but an entire tranquillity of the nervous system, and hardly any weakness."

PROF. GRAHAME, of the Maryland College of Pharmacy, has resigned the chair of Pharmacy, and retires from pharmaceutical pursuits to devote his attention to another profession.

DR. EDWARD WARREN, of Edenton, N. C., editor of the *North Carolina Journal of Medicine*, has been appointed to the chair of *Materia Medica* and *Therapeutics* in the University of Maryland, at Baltimore.

THE CHEMIST AND DRUGGIST, OF LONDON.—We are happy to add to our exchange list this new and well-conducted journal. It was established as a means of direct communication with the chemists and druggists, and has, we understand, met with signal success. We shall give it a full notice at another time.

THE PENINSULAR AND INDEPENDENT MEDICAL JOURNAL.—This periodical has, for the last two years, been published in Detroit, Mich., as a union of two medical journals which were previously published separately in that city. It is hereafter to be discontinued—the valedictory of its senior editor, Prof. A. B. Palmer, appearing in the last number. The cause given by the publishers for the discontinuance of the work is, that "the outlay the past year has been so much larger than the receipts."—*Boston Med. and Surg. Journal*.

PROF. AUSTIN FLINT, JR., has recently been appointed to the chair of Physiology and Microscopic Anatomy in the New Orleans School of Medicine. The former incumbent of this, Prof. Peniston, has been transferred to the chair of Anatomy, Prof. Beard resigning it and assuming the duties of the chair of the Principles of Surgery and Surgical Pathology, while Prof. Choppin takes a new professorship, to be called the chair of Clinical and Operative Surgery. Dr. Flint, previous to accepting this position, had resigned his professorship in the New York Medical College.—*Am. Med. Monthly*.

UNIVERSITY OF LOUISVILLE, KY.—The commencement exercises at the close of the twenty-third session of the Medical Department of the University took place recently, and the degree of M. D. was conferred on forty-one of the recent class. A brief address was given by Hon. James Guthrie, President of the Board of Trustees, and the valedictory delivered by Prof. J. Lawrence Smith.—*Boston Medical and Surgical Journal*.

THE Collegiate Department of the Long Island College Hospital opened on the 29th ult., with an introductory by Prof. Hamilton.

SUBSCRIBERS will please notify us if they do not receive the JOURNAL regularly.

THE JOURNAL OF MATERIA MEDICA.

DEVOTED TO

Materia Medica, Pharmacy, Chemistry, &c.

Vol. II.]

JUNE, 1860.

[No. 6.]

Indigenous Tonics.

BY CHARLES A. LEE, M. D.

NUMBER VI.

ARISTOLOCHIA SERPENTARIA.

Snake-Root—Virginia Snake-Root—Snake-Weed.

THE *Virginia snake-root* belongs to the *apetalous exogenous plants*, which have no corolla, the floral envelopes in a single calyx, or wanting altogether. *Natural order*, Aristolochiaceæ, (birthwort family); *Linnean system*, Gynandria—Hexandria. Its Greek name has reference to the supposed medical virtues of the plant. The birthwort family in the United States includes only two genera, the *asarum* and the *aristolochia*, each including three species, and all possessed of similar medicinal properties. The genus *Aristolochia* is composed of herbaceous or shrubby species, with twining or erect stems, and usually cordate or entire leaves; sometimes three-lobed; with radical or axillary flowers. There are numerous species of the plant, most of which are natives of the tropical portions of South America, and are shrubby, for the most part; others are found in India, on the borders of the Mediterranean, and in North America. These plants are all regarded as antidotes in cases of bites of poisonous snakes in every country where they abound; and it is very probable, from their highly

stimulating properties, they may possess such virtues in some degree. It is well known, however, that they are not reliable in very severe cases. The active principle resides in the root. The *A. serpentaria* generally grows to the height of eight or ten inches, and has a perennial root, composed of numerous slender fibres, arising from a knotty, brown head, sending up a number of stems, simple or slightly-branched, jointed, flexuous, and often of a reddish tinge. The *leaves* are alternate, on short petioles, oblong, entire, acuminate, heart-shaped at base, three-nerved. The *flowers* are nearly radical, like those of the *asarum*, having a stiff, leathery texture, and a dull brownish, lurid, purple color. The *anthers* are six, and sessile, oblong, obtuse—*pod* naked; *seeds* flat. This plant is found throughout the United States, from New England to Mexico and California, in rich, shady woods, especially on hill-sides. It is most abundant in the Middle and Western States, but is not so common in alluvial and calcarious soils. It flowers in June, and matures its fruit in July and August. Its blossoms rarely appear before the third year, but as they are few, and often concealed under dead leaves, some have supposed that the inflorescence is not developed annually. This, however, is a mistake.

Physical Properties and Chemical Composition.—The root, the officinal portion, is made up of tufts of slender, long, matted fibres, attached to a knotty head; they are brittle, and of a yellowish-brown color, possessing an agreeable aromatic odor, and a pungent, aromatic, bitter taste, not easily concealed by any admixture. The powder is grayish, and its properties are all imparted to proof spirit, partially only to water, with which it forms a yellowish-brown infusion, while, with alcohol, it affords a greenish tincture. *Serpentaria* has been analyzed by several chemists; first by Chevallier, who found in the root volatile oil, a yellow bitter principle soluble in water and alcohol, resin, gum, starch, albumen, lignin, and various salts. Buckholz obtained from 1,000 parts, 5 of a green fragrant volatile oil, 28.5 of a yellowish-green resin, 17 of extractive matter, 181 of gummy extract, 624 of lignin, and 144.5 of water. The volatile oil passes over with water in distillation, rendering the liquid milky, and impregnating it with the peculiar odor of the root. Dr. Bigelow

states that small crystals of camphor are deposited around the edges of the surface of the liquid, on standing.

Recent analysis by the Tildens yields the following results:—

Organic Matters, - - - - -	85.833
Inorganic Matters, - - - - -	14.167
<hr/>	
Total, - - - - -	100.000
Albumen, - - - - -	0.674
Gum, - - - - -	1.917
Starch, - - - - -	1.657
Sugar, - - - - -	2.057
Extractive, - - - - -	3.241
Coloring Matter, - - - - -	3.174
Bitter Principle, - - - - -	2.916
Oil, - - - - -	3.833
Resin, - - - - -	2.036
Malate of Lime, - - - - -	1.874
Nitrate of Potash, - - - - -	0.934
Soluble Salts, - - - - -	1.338
Insoluble Salts, - - - - -	12.685
Lignin, - - - - -	61.664
<hr/>	
Total, - - - - -	100.000

The medicinal virtues are dependent chiefly on the volatile oil and bitter principle, though the extractive and resin are by no means inert. The bitter principle is probably an alkaloid, though not yet isolated. The root contains but small quantities of albumen, gum and starch, while the oil and resin preponderate over the other medicinal constituents. The small amount of soluble salts, and the very large proportion of the insoluble is also worthy of note. The caudex contains a much larger amount of starch than the fibrous portion.

Other Species and Varieties of Serpentaria.—According to Gray, there are but two other species of the snake-root in the Northern, Middle and Western States, viz: the *A. siphon* (*pipe-vine—Dutchman's pipe*), and the *A. tomentosa*. The first has round, kidney-shaped leaves, slightly downy underneath; peduncles with a clasping bract; glabrous, and abounds in rich woods, from Pennsylvania, southward, along the mountains; climbing trees.

The *A. tomentosa* has round, heart-shaped leaves, very veiny, with a greenish-yellow calyx. This, also, is a climbing plant,

ascending to the summit of the highest trees, and has a thick, creeping root, entirely different in shape from that of the official species. Both of the above species have the same medicinal properties as the *A. serpentaria*.

Besides the above, there are three other species, or, perhaps, varieties, found in some parts of the United States, viz: the *A. hirsuta*, *A. hastata*, and *A. reticulata*. The *A. hirsuta* was first described by Muhlenberg. It has a root consisting of a knotty caudex, sending out numerous simple, slender fibres, sometimes several inches in length, resembling the root of the *A. serpentaria*. There are several jointed, flexuous, pubescent stems, less than a foot high; the leaves are large, roundish, cordate—the lower ones obtuse, the upper abruptly acuminate, and all pubescent. On both sides and at the margin the flowers are solitary, on peduncles originating from the points near the root. This species is not uncommon in the Western States and Virginia, and its roots are often substituted for those of the official species. The *A. hastata*, of Nuttall, is, doubtless, a mere variety, and differs from the *A. serpentaria* in having acute, hastate, somewhat cordate leaves, and the lip of the corolla ovate. Its root closely resembles that of the official plant, and is frequently mixed with it, as found in the market. It abounds in the more Southern States and west of the Mississippi. The *A. reticulata*, of Nuttall, is now substituted to a great extent for the Virginia snake-root, from which the root differs chiefly in the size of the radicles, which are thicker and less interlaced, each root having usually a considerable portion of one or more stems attached to the caudex. The root, which is yellowish, can scarcely be distinguished in smell and taste from that of the common serpentaria, and it is found to be equally efficient as a remedy. Chemical analysis shows it to contain the same constituents, but a larger per centage of volatile oil, gum, and bitter extractive. (*Bridges; Am. Jour. of Pharm.*, 16, p. 16.) This species grows abundantly in Louisiana, Arkansas, and west of the Mississippi, and is collected to a considerable extent by the Indians. All the above species, or varieties, are endowed with the same properties as the official species, and may be substituted for it.

Physiological and Medicinal Properties and Uses.—This is one of the most important and valuable of our indigenous remedies.

Introduced to the notice of the profession as early as 1633, by Johnson, in "*Gerard's Herbal*," it has maintained its reputation to the present time, and is now generally regarded as scarcely inferior to any other article as a warm, stimulating, diaphoretic tonic. Introduced at first as an antidote to the bite of serpents, in common with all its other species in other parts of the world, it was surmised that it would prove of equal value in low and malignant fevers, in which the blood was supposed to be poisoned, and being found efficacious in such cases it was applied to the treatment of other fevers and other forms of disease, as intermittents, remittents, gangrene, typhoid pneumonia, dyspepsia, chlorosis, &c. Experience soon proved that it had great power in sustaining the circulation, when weak and languid—promoting, especially, the capillary circulation, while it caused diaphoresis; acceptable to the stomach in moderate doses, but, in large, producing nausea, vomiting and purging, and exerting no special influence on the brain or cerebro-spinal system.

Jörg found, in his experiments, that when taken in doses of two to five scruples of the root, in four to eight ounces of water, and also in powder, in doses of from fifteen grains to one scruple, it excited the intestinal canal, producing a determination of blood to all the abdominal viscera, and occasioning flatulence rather than an increased mucous secretion. The phenomena usually following its administration were eructations, nausea, vomiting, pains, and a sense of weight in the stomach, borborygmy, colicky pains, frequent expulsion of wind, tenesmus, consistent stools, sometimes increased, and at others diminished appetite, tumefaction of the abdomen, especially at the epigastrium, and itching of the anus. In other instances it produced a sense of heat, weight, and pain in the head, indicating a degree of congestion of the brain. It was found also sometimes to produce excitement of the circulation, and in other cases an increased secretion of urine. The infusion seemed to effect the brain most, while the powder acted more efficiently on the intestinal canal. The effects of *serpentaria*, when administered in small doses, continue during eight or twelve hours; in larger doses during eighteen to twenty-four hours. On this account, Jörg concludes that it should not be repeated more than twice in twenty-four hours; while a single dose a day is sometimes sufficient. The medium dose for an adult, he

says, is one dram of the root, either in powder or infusion. From the result of his experiments with this remedy, Jörg concludes that the serpentaria can be useful only in cases attended with a torpid condition of the intestinal canal, as it tends to arrest the mucous and other secretions from the mucous membrane of the bowels; it is principally useful in chronic diarrhœa, unconnected with inflammation. In colliquative diarrhœa, also, not attended with phlegmasiæ, it will prove beneficial. On the contrary, he thinks it should not be exhibited in those cases in which the intestinal torpor is connected with congestion, or phlogosis, however alight, of the abdominal viscera, nor when congestion of the brain is to be apprehended. It is improper also during a flatulent condition of the intestines. These inferences were all derived from the effects of serpentaria, when administered to persons in health. Let us see how far they are borne out by actual experience at the bed-side.

It is generally conceded that the serpentaria is endowed with stimulating, tonic and diaphoretic properties, in a very high degree—combining the virtues of the simple bitters and the aromatic class of stimulants. Thus, in appropriate conditions, it improves the appetite, invigorates the digestive function, promotes animal heat, increases the force of the pulse, and in some conditions, as hectic fever and extreme prostration and debility, rendering it slower, by the increased tonicity imparted to the heart; while, in other states, it increases its frequency. Diaphoresis is very commonly the result after its administration, especially when given warm; if taken cold, the patient not being confined to bed, it usually operates upon the kidneys, causing diuresis. As a general rule, it promotes the secretions generally, especially the bronchial, gastric, and cutaneous. We have never known it to cause pain, nausea, vomiting, or purging, except when taken in overdoses. In such instances, some or all of these effects are certain to follow, and probably disturbed sleep, with pain or a sense of weight in the head.

The serpentaria was generally employed during the last century, and before the discovery and isolation of quinine, as a prophylactic and remedy for intermittents. Sydenham, in 1679, says:—To cure tertians in poor people, who are not able to bear the charge of a long process, take of Virginia snake-weed, finely

powdered, one scruple; of white wine, three ounces. Mingle them; let the sick take it two hours before the fit, and being well covered with clothes, let him sweat three or four hours, and let it be repeated twice when the fit approaches." (*Translated by Pechey*, p. 233.) In other places he advises to add it to Peruvian bark, or as a substitute for that medicine in intermittents. The celebrated Mead & Huxham also employed it extensively, not only in this class of diseases, but in all low forms of disease, and sinking states of the system, where the more stimulating tonics are indicated. In the retrocedent gout, where it fastened upon the stomach or any of the internal vital organs, these and other writers of that period recommended a warm infusion of the snake-weed to be freely given, as a very certain and successful remedy. Its reputation continued unabated almost during the sixteenth and seventeenth centuries; but it fell into comparative disuse during the eighteenth, and was again revived about the commencement of the present century, and is now a favorite and popular remedy. Cullen remarks that "the serpentaria, by its powerful acrimony, proves a powerful stimulant to the system, and therefore may be useful in some cases of continued fevers. But as the cure of either intermittent or continued fevers by stimulants alone is an ambiguous and dangerous practice, so in the former it is only safe when joined with the bark; and the use of it in continued fevers is to be employed with much caution. The common notion of its alexipharmic powers, both with respect to it and all the others, which have gone under the same title, is an incorrect and false notion, liable to much abuse, and which I, myself, have had occasion to observe. The stimulant power of the serpentaria is especially suited to the low and advanced state of the typhus only, and even then it will be more safely joined with the bark than employed for its stimulant power alone. It is certainly owing to this ambiguity in its use that it is not nearly so much employed in practice as it was some forty years ago." (*Mat. Med.*, vol. 2, p. 86.) Such was the estimation in which this remedy was held about a century ago; since then its powers have been more fully investigated, and more accurately ascertained. Its antiperiodic virtues are now known to be feeble, and its former success in paroxysmal affections was doubtless chiefly owing to the cinchona combined with it. The combined proper-

ties of these two remedies are well illustrated in the celebrated "*Huxham's tincture of bark*," as well as the "*compound tincture of Peruvian bark*" of the British and American Pharmacopœias. This association of serpentaria with cinchona answers an admirable purpose in many cases, especially where in intermittent or remittent fever there is great debility associated with considerable torpor of the stomach; and it is no less beneficial in low, sinking or malignant cases of typhus or typhoid fever, combined with camphor or carbonate of ammonia. In typhoid pneumonia, sphacelus and gangrene, or common pneumonia in intemperate subjects, or persons of broken constitutions, the same combination will be found particularly efficacious. As a diaphoretic when the skin is hot and dry, and the relaxing, depressing sudorifics are contra-indicated, the serpentaria answers an excellent purpose, supporting the vital powers, and stimulating the vital properties in a very marked degree. For this purpose the fluid hydro-alcoholic extract or tincture should be selected instead of the infusion, which contains comparatively a small amount of volatile oil and resin. From extended experience with this remedy we have come to place great reliance on it, as a supporting agent, in most forms of disease where the nervous and vital energies are greatly depressed, as in typhoid states of the system generally; in the latter stages of most febrile diseases, as continued or malarious fevers of every grade and type; in typhoid pneumonia; in exanthematous affections where the eruption has receded, or is tardy in making its appearance; in malignant scarlatina and diphtheria, in combination with camphor or ammonia; in atonic dyspepsia, in form of fluid extract, combined with fluid extract of rhubarb, and bicarbonate of potash; in gangrene and sphacelus, with some alcoholic stimulant; and as a gargle in malignant sore-throat. When wisely adapted to the pathological conditions of the system, and the nature of the disease, it will prove an admirable supporting remedy, entirely exempt from the objections brought against it by Jörg, and founded on results obtained from its trials on the healthy subject. An infusion of serpentaria has been found useful in allaying vomiting. In the Southern States it is extensively employed as a popular remedy by the negroes in the low stages of pneumonia, to which they are particularly liable, though its efficacy is greatly increased by the addition of cam-

phor. Rafinesque says that the "serpentaria is diaphoretic, tonic, anodyne, antispasmodic, cordial, antiseptic, vermifuge, exanthematic, alexiteric, and a powerful stimulant of the whole system. It is useful in the low stages of fevers, to support strength and allay irregular actions; too stimulant in inflammatory fevers and disorders, but an excellent auxiliary to Peruvian bark and other tonics in intermittents, enabling the stomach to bear them, and increasing their effects. In remittent fevers it is preferable to bark. It is deservedly a popular country remedy, in infusion, for pleurisy, exanthems, cachexia, catarrh, rheumatism, &c., acting as a sudorific. In bilious pleurisy it has been found highly serviceable; in bilious complaints it checks vomiting, and tranquilizes the stomach. In typhus and typhoid pneumonia it has been of beneficial effects, promoting perspiration, checking mortification, and abating the symptoms. It is probably a good substitute for camphor and valerian in many cases. The doses of the powder are from ten to thirty grains, often repeated, or an ounce of the warm infusion every three hours. Wine is an excellent vehicle for it in fevers. Many compound tinctures contain it." (*Med. Flora*, vol. 1, p. 64.)

In the early part of our practice we were much in the habit of giving snake-root and cinchona in combination, especially in the treatment of intermittents, and with highly satisfactory results. The late Prof. Chapman was very partial to its use in such cases. "In some patients," he remarks, "such is the irritability of the stomach, that bark, in substance, cannot be retained even in the smallest dose. In such cases we resort to it, either in decoction, prepared by itself, or in union with some aromatic, as cloves, cinnamon, orange peel, or Virginia snake-root. The last of these articles, I think, is to be preferred, since it renders the mixture quite as pleasant to the taste, is as comfortable to the stomach, and perhaps more efficacious. Combinations, too, of this sort will cure intermittents, when the bark alone fails, and are particularly adapted to children, and other delicate persons." (*Elem. of Ther.*, vol. 2, p. 411.) A favorite formula with Dr. Chapman, in cases of intermittents, was: half an ounce of cinchona bark, one dram of serpentaria, and twenty grains of carbonate of potash, divided into four powders, one to be given every three hours during the intermission. "This," he remarks, "has long had an

established reputation in the practice of this city (Philadelphia), and I have known it very promptly to arrest some of the most intractable cases." (*Ibid*, p. 411.) Dr. C. also thought that serpentaria was preferable to bark in the case of remittent fever, inasmuch as it is rarely offensive to the stomach, and may be given in those obscure states of the disease where the remission is not discernible. This article was extensively employed, and is yet, in many parts of the United States, as a popular remedy in the secondary stages of pleurisy. After bleeding, it was a very general practice to resort to a strong infusion of this article, with a view of exciting perspiration, and with very favorable results. Catarrhs, rheumatisms, and other febrile affections were managed in the same way. This practice is still common in the Middle, Southern and Western States. Dr. C. speaks in the highest terms of serpentaria in bilious pleurisy, and says he always found it useful in such cases, and that there is no modification of disease in which it displays its power more advantageously. After moderate depletion and a thorough evacuation of the alimentary canal, a warm infusion is to be freely given, in order to excite copious diaphoresis. From its power of tranquilizing the stomach and checking vomiting, it is well adapted to bilious cases, especially when attended with prostration and a cool surface. The late Prof. Eberle considered the snake-root to be peculiarly suited to fevers of a low-grade of excitement, and to every variety of fever, when the system is sinking into a typhoid state. He also thought it especially applicable in the latter stages of febrile diseases, when the skin and tongue remain dry and hot, and the pulse is feeble and frequent. Nothing is more common than to find in such cases the tongue becoming moist and clean, and the skin assuming a natural temperature, while the pulse and general powers of the system are invigorated under its use. We have often seen the most strikingly beneficial effects from its use in typhoid pneumonia, proving at the same time stimulant, diaphoretic and tonic, equalizing the circulation, and imparting vigor to the vital forces. It is an excellent plan to combine it with senega in the treatment of this disease, as well as the latter stages of common pneumonia and bronchial affections, attended with much prostration. It must be borne in mind, however, that serpentaria is not a powerful stimulant or tonic, and that where there is very

great debility or prostration more powerful agents will be necessary, alone or in conjunction with it, as wine, brandy, quinine, ammonia, camphor, &c. This is one of the first medicines to which we may resort, as Prof. Wood has remarked, whenever any febrile disease begins to exhibit a low or typhoid character, provided the stomach be wholly free from inflammation or vascular irritation. When typhus or typhoid fever, for example, is passing from the first stage of excitement into that of debility, or protracted remittent fever is assuming a low character, in typhoid pneumonia, and in small-pox, scarlatina, malignant sore-throat and erysipelas, under similar circumstances: in all such cases the snake-root will prove a reliable and valuable remedy. No one, however, can suppose that it possesses any special, specific, curative powers. In very serious cases of disease it is rather to be employed as an adjuvant than the sole or principal remedy; as a gargle in malignant sore-throat, with sumach berries, it has proved of great utility. As an alexipharmic, or remedy for snake poison and canine virus, it is now very justly exploded.

Its chief value is as a tonic diaphoretic. As an emmenagogue serpentaria has long enjoyed considerable reputation. In this respect it may be ranked with the senega; the warm infusion given at bed-time, after the use of the hot pediluvium, or hip-bath, will often restore the menstrual flow. On the whole, I would say, with Christison, that "though its virtues generally have been exaggerated by some, it deserves more attention than it has yet received as a tonic diaphoretic." The cold infusion acts simply as a mild and efficient tonic.

Preparations and Doses: Fluid extract, powder, infusion, tincture, compound tincture, syrup.—The *fluid extract*, prepared in vacuo by hydro-alcohol, deserves the first rank in the list of preparations, inasmuch as it contains all the active organic constituents in a concentrated form. An ordinary dose of the Tildens' manufacture is from one-fourth to one-half dram, repeated according to circumstances. It may be flavored with any of the aromatic volatile oils or essences, as wintergreen, sassafras, spearmint, peppermint, anise, fennel, or checkerberry, although it is difficult to entirely conceal the taste of the serpentaria. The fluid extract of this root has not long been introduced into practice, and the generality of physicians are wholly unacquainted

with it. It is, however, destined to supersede most of the other preparations, as its excellencies become better known.*

Tincture.—The tincture of *serpentaria*, as prepared by the Tildens, is made with three ounces of the fluid extract to one pint of diluted alcohol, of which a dose is from one to two drams. According to the London, Edinburgh and Dublin Dispensatories, the tincture is prepared by taking three ounces and a half of the cut and bruised snake-root, and macerate for fourteen days, (seven days, Dublin,) in two pints of proof spirit, and filter. The Edinburgh Dispensatory adds one dram of bruised cochineal. This tincture is pronounced to be stimulant and diaphoretic, and a useful addition to infusion of cinchona bark in typhoid and putrid fevers, gout, and periodic headache. The dose is from f. 3 ss. to 3 ij. The U. S. P. directs three ounces of the snake-root to two pints of diluted alcohol; macerate fourteen days, express, and filter through paper, or by moistening the root, in powder, with diluted alcohol, allowing it to stand for twenty-four hours; then transferring it to a percolator, and gradually pouring upon it diluted alcohol, until two pints of filtered liquor are obtained. This is, for the most part, a reliable preparation, but in some cases objectionable, from the quantity of spirit it contains.

The *powder* is given in doses of from ten to thirty grains, but is objectionable from the large amount of woody fibre and other inert matters contained in it, which only tend to disorder the stomach, and add nothing to its efficacy.

Infusion.—The infusion, according to the U. S. P., is made with half an ounce of the snake-root to one pint of boiling water; macerate for one hour in a covered vessel, and strain. The dose would be one fluid ounce. The foreign Pharmacopœias use the

* A. B. Taylor's process for obtaining a fluid extract of *serpentaria* is a very excellent one, and ought to be generally known. He directs to take of *serpentaria* root, bruised, twelve ounces; alcohol and water, a sufficient quantity. Mix the *serpentaria* with twelve ounces of water, and allow it to stand for twenty-four hours; then transfer it to a percolator, and pour alcohol gradually upon it, until a pint and a half of filtered liquor is obtained. Place this in an evaporating dish, and allow it to evaporate spontaneously, until reduced to six fluid ounces. To the root, exhausted by alcohol, add water, and displace till it is exhausted, or until about three pints have passed; evaporate this portion in a water-bath to six fluid ounces, mix the two parts together, and filter. Each fluid ounce of this represents one ounce of the root. Dose, from fifteen to forty-five drops.—*Am. Jour. of Phar.*, vol. xx., p. 207.

same proportions, directing to macerate four hours, and taking from half an ounce to two ounces as a dose. As the active principles of serpentaria are chiefly volatile oil, in combination with resin, it is obvious that an infusion of the root will take up but a small portion of the active organic constituents. If the bitter principle is an alkaloid, as there is good reason to suspect, then a cold infusion would prove simply tonic, and probably answer all the indications of the simple bitters. But as a diaphoretic tonic, the tincture or fluid extract, given in warm tea, would be preferable. In making the infusion, the Tildens direct half an ounce of fluid extract to one pint of water, of which the dose is from one to two ounces. In making the infusion in the ordinary way, a covered vessel should always be preferred.

The *syrup* of snake-root is not often used. It may be easily prepared by taking two ounces of the fluid extract, and adding to one pint of syrup. Dose: one and a half to three drams. In cases of children, this preparation might be preferable to the others.

The *compound tincture of snake-root*, as kept in the shops, from the Tildens' establishment, is made after the following formula:—

Fluid Extract of Snake-Root,	- - - -	½ ounce.
“ “ Ipecac,	- - - -	“
“ “ Saffron,	- - - -	“
“ “ Ladies' Slipper,	- - - -	“
Camphor,	- - - -	“
Diluted Alcohol,	- - - -	1½ pints.

Dose: one to one and a half drams.

This is an excellent antispasmodic tonic, possessing no slight alterative properties.

The Virginia snake-root enters largely into the composition of the “*compound tincture of Peruvian bark*” of the U. S. P., also the same preparation of the three British Pharmacopœias, and also the Edinburgh “*Electuarium Opii*.”

In *decoction* it is never to be used. The following formula will be found well adapted to many cases:—

R.—Rad. Serpentariæ,	- - - -	3j.
“ Colombo,	- - - -	3ij.
Cort. Cinnamon.,	- - - -	3j.
Aq. Bullientis,	- - - -	3vi.

Macerate for one hour, and strain. Dose: a wine-glassful.

℞.—Pulv. *Serpentariæ*,

Magnesiæ, Alb., - - - - - aa. gr. xvj.

Pulv. *Rhei*, - - - - - gr. xij.

Mix. Divide in six equal parts. In dyspeptic affections, in nine parts.

℞.—*Powdered snake-root*, gr. xxiv.; *camphor*, grs. xlviii.; *conserve of roses*, q. s. Mix. Make eighteen pills—to be taken during the apyrexia, in malignant intermittents. ℞.—*Powdered snake-root*, *contrayerva*, *aromatic snake-root*, aa. 3j.; *preserved ginger*, 3vi.; *syrup*, q. s. Make electuary; 3ss. every four hours, as a febrifuge. ℞.—*Virg. snake-root*, *contrayerva*, aa. 3v.; *boiling water*, Oj. Macerate one hour, strain, and add tincture of *Virginia snake-root*, fl. 3ij. ℞.—*Compound infusion of Virg. snake-root*, fl. 3xij.; *tinct. of allspice*, fl. 3iv. M. Four spoonful every six hours, in retrocedent and atonic exanthema. ℞.—Add fl. 3ij. of vinegar to fl. 3xvi. of last mixture. Dose, as above, in petechial typhus. ℞.—*Virg. snake-root*, 3vj.; *boiling water*, fl. 3vij. Infuse and strain; when cold, add *sulphuric ether*, fl. 3ij. One tablespoonful every hour. ℞.—*Virg. snake-root*, 3vj.; *vanilla*, 3ij.; *sherry wine*, sufficient. Macerate for four hours, and add to each pint of the strained liquor, *camphor*, 3ss.; *acetic ether*, fl. 3j.; *syrup of cinnamon*, fl. 3ss. Dose, two spoonful an hour, in low states of the system. ℞.—*Virginia snake-root*, 3vj.; *proof spirit*, fl. 3v.; *water*, sufficient to obtain six ounces of strained fluid; after one hour of infusion, add *camphor*, 3ss.; *balsam of Peru*, 3j.; *gum arabic*, 3ij. Make an emulsion, and add *acetic ether*, fl. 3j. One spoonful every hour, in cases requiring stimulation.

Atropa Belladonna.

(BELLADONNA—DEADLY NIGHTSHADE.)

CALYX campanulate, persistent, in five-pointed divisions: corolla campanulate, five-lobed, longer than the calyx: five stamens included irrawl-shaped threads, carrying round, heart-shaped anthers. The fruit is fleshy, rounded, a little depressed, in two cells, containing a great number of small, reniform seeds.

Belladonna has a perennial root, thick and fleshy, an erect stem, two to three feet in height, dichotomous, cylindrical, vilous; leaves alternate, sometimes doubled; petioles short, oval-pointed, almost entire. The fruit is a roundish berry, at first green, then red, and finally nearly black; it is surrounded at the base by the calyx. The Belladonna is a native of Europe, though it grows vigorously under cultivation in this country.

It contains, according to Brandes, malate of atropia, 1.51; gum, 8.33; starch, 1.25; chlorophylle, 5.84; ligneous matter, 13.7; osmazome, salts, &c.

A dangerous narcotic; every part of the plant is poisonous; and children and the ignorant have so often suffered from eating the berries, the beautiful appearance and sweet taste of which render them very alluring. The symptoms which they induce are those of intoxication, accompanied with fits of laughter and violent gestures, great thirst, difficulty of deglutition, nausea, dilatation of the pupil, with the eyelids drawn down, redness and tumefaction of the face, stupor or delirium, a low and feeble pulse, paralysis of the intestines, convulsions, and death. In medicine, Belladonna is not only narcotic, but diaphoretic and diuretic.

Belladonna has been often employed, internally, in the treatment of neuralgia. This means is particularly successful in the neuralgias of the face, when the diseased nerve is deeply seated. The application of the extract of Belladonna to the skin, by coating the epidermis, have an incontestible efficacy when the affected nerve is situated superficially. The good effects of the endermic method have been tested when the nerve is deeply seated, as in the case of sciatica. It has been employed with success in the endermic nervous colic of hot countries.

The preparations of Belladonna, whether administered internally, or externally applied, succeed very often in calming and soothing pain without exerting somniferous properties, as has been pretended. They have been especially employed in combating spasmodic contractions of many organs, as the anus, ureters, and neck of the uterus. It is employed often for dilating the eye in many species of ophthalmia; sometimes by applying, with friction, the extract, to the eyelids and eyebrows, and sometimes by dropping into the diseased eye a little of the juice of the plant, or of the softened extract. This means has been employed by many surgeons, not only before the operation for the cataract, but even after the operation has been performed, to prevent inflammation of the iris, so common and so fatal in this operation. Belladonna has been successfully employed in incontinence of urine and spermatorrhea. It is considered a powerful remedy in these affections.

It has been employed against cancers, ileus, epilepsy, tetanus, insanity, &c., as also as frequently in whooping-cough. Some German physicians have attributed to Belladonna the remarkable property of being prophylactic of scarlatina, which assertion has been confirmed by numerous instances. M. Guersant had recourse to this practice whenever he was called to a family where one of its members was affected with scarlatina. He has often remarked, that so often as his patients took Belladonna the malady did not appear, and that when the administration of this agent ceased, some days after scarlatina developed itself, but then it was very light. This malady is so dangerous when it is epidemic that no means should be rejected which presents itself to prevent it, even though its efficacy be not yet perfectly demonstrated. The alcoholic tincture has been administered, in such cases, in doses of two drops in a potion, to be taken during the day, for a child from one to three years of age; from three to six years, three drops—increasing one drop of the tincture for each year additional.

Belladonna has been given with great success in incontinence of the urine, so frequent in children and youth, and unfortunately so stubborn, as every one knows. Two remarkable cases in the practice of Blache are on record. A young woman of eighteen years, and a young man of fifteen years, owed their cure to this remedy, after having in vain tried the best means made use of in similar cases. Sulphurous baths, sea-bathing, refrigerating, and astringent applications; tonics and ferruginous preparations, internally; tannin, ergot, nux vomica—all had failed, and this notwithstanding that the most available precautions were employed with an unceasing perseverance. After six months their health was restored, but the use of the remedy in each case was continued.

The efficacy of the medicine in the treatment of this affection depends upon its being continued for a length of time, and being increased at intervals more or less distant.

"Belladonna has been employed with success as an anodyne in neuralgia, tic-douloureux, arthritic pains, painful ulcers, and glandular enlargements—also as an antispasmodic, resolvent, and discutient; has been found beneficial in epilepsy, mania, hysteria, chorea, and other maladies of the cerebro-spinal system."—*Parcira*.

It has been highly recommended in whooping-cough, in the advanced stages of which it is undoubtedly beneficial. In neuralgia it is one of the most effectual remedies in our possession, and it may be employed to give relief in other painful affections. Hufeland recommends it in the convulsions dependent on scrofulous irritation. It has been prescribed in nervous colic, chorea, epilepsy, hydrophobia, tetanus, mania, paralysis, delirium tremens, amaurosis, incontinence of urine, rheumatism, gout, dysmenorrhea, obstinate intermittents, scarlatina, dropsy, and jaundice. It is said to have been effectually employed in several cases of strangulated hernia. (Wood.) The extract, rubbed upon the areola of the breast, has been found quickly to arrest the secretion of milk, and, upon the abdomen, to relieve the vomiting of pregnancy, and other irritations sympathetic with the gravid uterus.

M. Popper asserts that small doses of the tincture of Belladonna, frequently administered, will cure quinsy, if it be not complicated with syphilis, often in the short space of twenty-four hours. He says he rests this assertion on an experience of more than five hundred cases.

Effects of Belladonna in the Third Stage of Pneumonia.—On the 2d of October, 1852, towards noon, M. X., a monk, at Berguac, twenty-five years of age, pale, dark complexion, of a lymphatic, sanguine temperament, of strong constitution, enjoying general good health, was imprudent enough, after inordinate exertions in the duties of his profession, to take, at a single draught, a large glass of iced water. During the night he was taken with a chill—called at six o'clock on the evening of the 3d to see him—found the following symptoms: anxiety, severe headache, eyes injected, white tongue, mouth open, intense thirst, nausea, sleeplessness, urine scant with sediment, burning dry skin, frequent pulse (115), dyspnoea, painful persistent cough, *tearing* expectoration of viscid mucous, mixed with air and red blood—severe pain in the right lung, chiefly under the nipple—dullness over the interior two-thirds of the lung of that side, with loud pneumonic crepitation. In spite of very low diet, appropriate drinks, rest, four free bleedings from the arm (all more or less cupped), within the space of thirty-six hours from my first visit, in spite of several large doses of tartar-emetic and ipecacuanha, two leechings, one to the pain-

ful part, the other around the inside of the ankles; in spite of blisters on the breast, and on the legs, synapism, emollient clysters, &c., the disease continued to progress.

At 10 o'clock, on the evening of the 9th, the local and general symptoms had continued to increase in number and gravity, until it was obvious that red hepatization of the lungs had taken place; face pale and anxious; extreme debility; lying all the time on the back; delirium—subsultus tendinum, vague expression, stupor, dry tongue; insatiable thirst for cold water: dry skin; eyes partly open; the eye-balls turned up; the pupils dilated: the retina slightly sensible to strong light; passing urine involuntarily; pulse low, interrupted, and diaphragmatic; respiration hard; cough scant, and difficult expectoration; sputa thick, and discolored; dullness increased and extended; respiratory murmur, well over the seat of the disease; *rales* and other bronchial sounds; cold extremities: tendency to sinking towards the foot of the bed.

Under the above circumstances, with no reasonable hope of evading an unhappy termination by ordinary means, we prescribed fifteen centigrammes of the aqueous extract of Belladonna, mixed with ten grammes of "*sirop de capillaire*," taken at one time.

At the end of an hour and a half the effect of the Belladonna was obvious—the patient slept tranquilly and quietly. In a few minutes his temperature augmented, face became animated, warm, vapory, and abundant perspiration covered the body; the pulse rose, became stronger and less frequent; respiration was relieved; the symptoms all became more favorable. After two consecutive hours of repose, the patient awoke free from delirium, and feeling much better.

At 10 o'clock in the morning, the pneumonia, which had to a certain degree reassumed the characteristics of the first stage, was in a fair way to terminate by resolution.

Convalescence continued up to the 16th of November, when it was complete.—*De la Rue* (translated from the *Revue de Thérapeutique Médico Chirurgicale*).

Dr. Billings Reports a Case of Mammary Abscess Relieved by Belladonna.—Having recently had a case of this disease, and the manner in which it was treated resulting so favorable, that I am

induced to offer it for publication. It is one of those diseases which is not unfrequently attended with serious results, and any suggestion in regard to its treatment may be gladly received by the profession. I shall offer nothing new in regard to its medication at the present time, but simply corroborate the truth of a method already known, so far as the following case will do it:—

On the morning of the 24th of February last, I was called to visit Mrs. D., who was suffering, to all appearance, from a mammary abscess, which must have terminated in suppuration, had there not have been more than ordinary means resorted to.

She had recently been confined with her second child, which she was weaning on account of her ill health. Upon examination I found the right mammary gland enormously swollen, hard, knotty, throbbing, and so painful as to render the most gentle means for removing the milk unbearable. There was much fever, a quick, hard pulse, with great depression and anxiety of the mind.

I ordered an application of the extract of Belladonna spread upon a linen cloth in the form of a plaster, to be immediately applied, leaving a small aperture in the centre for the nipple to pass through, which was afterwards to be covered with a poultice.

After administering a cathartic to move the bowels, which were very costive, and the tincture of *veratrum viride*, to be taken until the pulse was brought to its natural standard, I left my patient until the following day, when I found her improving beyond all expectation. The tenderness and pain was greatly removed, besides much diminution in the size of the gland, and its hardness. The veins, which had been engorged and obstructed in their passages, presented a much more natural appearance. There was but little febrile excitement, and a very marked expression in the countenance of rapid improvement.

I applied the breast-pump, and what remaining milk there was which had not flowed into the the poultice was removed.

The local application only was continued, when, on the third day, the breast had assumed its natural appearance, and she was perfectly well of the local difficulty.

David reports two cases in which the internal use of Belladonna led to the reduction of strangulated hernia, which seemed to demand an operation. He gave half a grain of the extract every

half hour. In one case three, and in the other four doses were taken.

"In the twenty cases of whooping-cough cured by the use of Belladonna, the cough and hoop returned in a few cases on exposure to cold, or in disagreeable, windy weather; but, by combining the extract with syrup of ipecac, a few drops soon cured the cough and hoop; in only one case of this number was it complicated with inflammation of the lungs, and this case recovered. The average duration of my twenty cases was ten days after the hoop had commenced, when the case was free from complications, which shows the great advantage of this treatment. The ordinary duration of the disease, when treated in the usual manner, is from one and a half to three and a half months; even by prussic acid or the application of nitrate of silver, the average is given from two to three weeks."—*Dr. L. Turnbull.*

In the *British Medical Journal*, a case is reported of incontinence of urine in a child eight years of age, which had existed since its birth. She had been treated with purgatives, alkalies, blisters to sacrum, &c., without improvement. She was finally relieved by the use of one-eighth of a grain of extract of Belladonna, night and morning.

When epilepsy is not curable, it is of great importance to diminish the number of fits, which become multiplied by habit, and render the disease less and less amenable to treatment. For this purpose, M. Fredericq has advantageously used Belladonna; and he gives it in the following doses to several young epileptics at the hospital of Courtroy, reported incurable:—Extract of Belladonna, three grains; water, six ounces. A tablespoonful three times a day, and when premonitory symptoms are perceived.

In the *Gazette Hebdomaire*, there is reported a case of inguinal hernia, which was relieved after taxis had failed, by the administration of the extract of Belladonna, in three or four-grain doses every half hour. The tincture of Belladonna was also employed locally by means of a flaxseed poultice.

In the same journal there is also a report of a case in which Belladonna was administered, with very great relief to the patient. In this there was no protrusion of the bowel, but, from the symptoms, obstinate constipation, great pain, stercoraceous vomiting, &c., it was evident that there was complete occlusion of the bowel.

The Belladonna in this case was employed after an operation for artificial anus had been decided upon. The remedy was used in the form of an ointment, by friction; and as soon as complete intoxication was induced its good effect was perceptible.

Arnica.

(ARNICA MONTANA.)

[Continued from April Number.]

ACCORDING to Richter, who, I will here remark, is very good authority, "some good may be expected from Arnica in all possible forms of disease in which there is a call for a strong excitement of the lymphatics, and an elevation of the nervous and vascular activity in the structures, more especially devoted to the functions of organic life—consequently in all kinds of glandular swellings, and the atrophies and schirrhosities of the liver, spleen, and lungs, dependent thereon; in blenorrhoeas of every kind; in chronic humoral asthma; in chronic diarrheas, whether atonic or colliquative; in old catarrhs; in high grades of hypochondriasis, hysteria, jaundice, &c. To these complaints it will always be more or less applicable, according as the system at large, or the diseased parts in particular, shall be more or less deficient in vital power and reaction."

Richter employed it with success, combined with seneka, in the latter stages of peripneumonia, when a universal torpid condition existed, in connection with a scanty, difficult and viscid expectoration. In paralytic affections it has acquired great credit; but Richter regarded it as applicable only to such cases as have their origin in organic lesions. It has been used in hemiplegia succeeding apoplexy, in paraplegia, and in various partial palsies proceeding from lesions of the spinal marrow or nervous textures of the abdomen, and has shown itself particularly serviceable in palsy of the bladder and lower extremities; and Richter was of the opinion that much good can be expected of it only in recent cases of palsy, and that in such as are of long duration it generally fails; observing that in the palsies consequent upon apoplexy it must be given within the first six weeks, in order to pro-

duce any good effect. In short, he regarded it as appropriate to all diseases in which the powers of life are depressed, with diminished susceptibility of the system, torpor of the secernent organs, stagnation and obstruction, with a tendency to decomposition and gangrene; as peculiarly adapted to persons of a leucophlegmatic habit, but contra-indicated by augmented excitability of the nervous system, by general venous plethora, by active congestion of the brain or other important organ, and by great weakness and susceptibility of the stomach and bowels. When long used it tends to confine the bowels, and in large doses is apt to impair digestion.

In intermittent fever it has been highly recommended, and has been found useful particularly in cases of long standing, complicated with a peculiar morbid condition of the nervous system, sluggishness of the abdominal viscera, enlarged and indurated spleen, cedomatous swellings of the belly and lower extremities, also in intermittents of a typhoid or malignant character; and in these diseases it may be advantageously associated with bark—fifteen grains of the powdered flowers, or one to two drams, in the form of an infusion, are given every hour during apyrexia. The root is said to be preferable when the complaint is associated with diarrhea. In the phlegmasiæ, it can only be safely used when they are complicated with a prostrate or typhoid condition of the system—have terminated in gangrene, or have assumed a chronic form.

Dr. Wood remarks that in the feeble forms of dropsy, and in cases of extravasation, either sanguineous or lymphatic, it would appear to be adapted by its property of promoting absorption; and in the latter affections it is considered as one of the most effectual remedies. It is possible that in this way it may have proved useful in obviating the effects of falls, blows upon the head, and other external violence, in the treatment of which it has, for a long time, enjoyed much reputation, both as an internal and external remedy. By promoting the absorption of fluids effused within the cranium or spinal canal, it may tend to relieve the paralysis occasioned by the pressure of these fluids upon the brain and spinal marrow, and by a similar operation upon effusions exterior to these cavities may, in some measure, remedy those embarrassments in particular parts resulting from pressure upon the nerves which supply them.

Dr. Buchanan speaks highly of its use internally and externally, and says that it sometimes irritates the skin; but this proceeds from its being used in too great strength or quantity; or it may be possible that there may be some peculiar idiosyncrasy which predisposes the skin of some persons to become irritated by it. This effect has been frequently observed when the fluid extract has been used in full strength, and plainly suggests the dilution of it before use externally.

In administering Arnica, it is proper to begin with a small dose of the preparation proposed to be used, and gradually to increase it till some positive effects are experienced. In typhus fever and other acute diseases, large doses are directed at the outset. The dose of the powder is from five to thirty grains. The tincture is directed to be prepared by two ounces of the flowers to sixteen ounces of diluted alcohol; the minimum dose of the powder being five grains, an equivalent of tincture should be forty drops.

The recent preparations of a fluid extract, which represents for one fluid dram one dram (or sixty grains) of the flowers, has a dose of five to thirty drops, and is a more convenient form of administration than the powder, and much stronger than the tincture, which is readily produced from the former by adding two ounces to one pint of diluted alcohol.

In diarrhea complicating typhus fever, it is used often with serpentaria, and if the fluid extract is employed, in the following proportion:—

Fluid Extract of Arnica,	-	-	-	-	-	2 drams.
" " Serpentaria,	-	-	-	-	-	2 "
Syrup,	-	-	-	-	-	1 "
Oil of Peppermint,	-	-	-	-	-	10 drops.

Dose, one-fourth dram every two hours.

Fomentations of Arnica and rue may be made readily by using the

Fluid Extract of Arnica,	-	-	-	-	-	2 ounces.
" " Rue,	-	-	-	-	-	1 "
Water,	-	-	-	-	-	9 "

Very useful in contusions.

A.

Uva Ursi an Uterine Excitant.

By Dr. WILLIAM JOHNSON, of White House, N. J.

THE use of this remedy in the place of ergot has been suggested by several physicians, and as far as my own somewhat limited experience is concerned it is favorable to its employment. Every physician often finds it desirable in the course of a labor to awaken the dormant energies of the uterus, and arouse it to more vigorous action. Its action may be too feeble from the commencement of the parturient process, or it may become so in its progress. The most prominent of uterine excipients is the *secale cornutum*. Its action, I believe, is undisputed, and equal to any article of the *materia medica*. Its peculiar action on the uterus is apparent in fifteen or twenty minutes, after its exhibition, in continuous pain. This kind of contraction has its disadvantages as well as its benefits; when given with a view to restraining hemorrhage it is the very thing we want, but when given for the expulsion of the child, this kind of contraction, whilst effectual, not unfrequently proves destructive of life. It is an article which certainly requires great caution in its exhibition, and in inexperienced hands has, without doubt, been the source of mischief, and suggests investigation for other articles which may supply its place as a uterine excitant.

M. Beauvais strongly recommends the substitution of *uva ursi*, as being as efficacious and far more innocent in its operation. In ordinary delayed labor he gives fifteen grains, in infusion, every hour; but when rapid effects are desired, as in metrorrhagia, a decoction of half an ounce to a quart of water is directed, in divided and frequent doses.

Dr. Harris, of Fayetteville, Ala., in the *Virginia Medical and Surgical Journal*, relates cases in which he has employed a strong decoction of *uva ursi* in *accouchements*, where the ergot of rye would ordinarily have been employed, and found its employment followed by vigorous pains, which soon cause the expulsion of foetus and placenta. Dr. H. prefers this medicine to ergot of rye, inasmuch as it does not cause such strong contractions as the latter, which are so very painful to the mother and dangerous to the child.

M. Gauchet was induced to give it a trial, from the prejudicial reports concerning the effects of ergot. He gave it in a case of lingering labor. The patient was forty years of age, and pregnant for the fourth time. After ten hours of great suffering, little progress had been made, though the os uteri was soft and tolerably dilated. Half an ounce of uva ursi leaves were now infused in a quart of water, for an hour, and a teacupful of this infusion was taken every half hour. After the first three doses, the contractions, which had almost entirely ceased, became vigorous, and the patient was delivered of a living child three hours after taking the first cup.

My own experience with the article is so limited, that what I advance will be considered more suggestive than didactic. I will, however, relate a couple of cases in which I have exhibited the article with apparent benefit.

I gave the uva ursi to a lady about twenty-five years of age. The case was *primi para*. She had been all night in labor; was very impatient and dejected. I saw her at 10 o'clock A. M. The membranes had ruptured, and the child's head was about half way through the superior strait. The pains, which had been active, had died away, so that for two hours she was without any. I gave her a strong decoction of uva ursi—about three teacupful. Pains resembling the natural contractions soon came on, and the child was expelled. I gave the article about 12 o'clock, and she was delivered before 2 o'clock.

The wife of S. W. had the membranes ruptured at 10 o'clock at night, and I saw her at 4 o'clock the following afternoon. She was at full time. The os uteri was open as large as a dollar, and the edges very tumid, but supple and very dilatable. The head was above the superior strait, and was in the most favorable position for traversing the pelvis. The pains were very inefficient, and at long intervals. The patient was of the opinion that this would be her last labor (she has had four or five children), and was exceedingly down-cast. I assured her that there was no reason whatever for her extreme dejection, and that matters were in a favorable train for delivery, but that she must have patience, and that her labor would probably be protracted during the night. As there was nothing, however, in her case to forbid the use of uterine excipients, I prepared a strong infusion of uva ursi—more

than half an ounce of uva ursi to one pint of boiling water. I commenced at 7 o'clock to give the medicine, in doses of one ounce every ten minutes; and before the patient had taken half a pint of the infusion, the pains became so intense that I discontinued its further use. The pains recurred every five minutes, and was violently expulsive. She was delivered of a child weighing nine and a half pounds. So powerfully had the uterus been aroused into action, that the placenta was thrown off before I could tie the cord. The child was very vigorous. I left the house before 9 o'clock. The patient did well.

Tasteless Medicines.

By J. W. THOMPSON, M. D., of Philadelphia.

"Conservative surgery" and "rational medicine" have been deservedly attracting a large share of attention within the last few years; and as a most important branch of the latter, I beg leave to call attention, in a few words, to the subject which the desire for handsome and reliable preparations has kept, until recently, entirely too much in the back-ground. Occasionally an effort has been made, and something accomplished, by some one who has been put to his wits' end by the weak stomach or obstreperous character of a willful patient, who has literally refused to take his nauseous prescriptions, choosing instead to run all the hazards of disease.

But only to a very limited extent have been these improvements, and the sick are still required to take such doses as a well person would loathe to utter detestation.

I am fully persuaded that such should not be the case, now that chemistry and pharmacy are being so wonderfully developed, and think that the taste of nearly every article in the materia medica may be either nullified or masked, without interfering at all with its essential properties.

When this cannot be done as a fluid preparation, it can generally be as a jelly or a solid—the latter in pillular or granular form, coated with sugar, and avoiding that, to many, sickening "glycyrrhiz. pulv.," in which not a few continue to put up pills, because it answers the purpose, and because their fathers did so.

A great help in this needed reform is the advancement which has been made in the preparation of the concentrated extracts, and in the separation of the vegetable alkaloids.

It would have been a fruitless task to have attempted, with many of the crude drugs as originally administered, but now is within reach of every hand;.

and let us see to it, one and all, that this step, which is to be the next great improvement in medicine, is taken right early.

In fact, we have no right as humanitarians to ask a patient to swallow nauseous doses, when we can minister to them in their affliction without offending the most delicate palate.

A few I know, who are grounded in the good old ways of antiquity, will say that it is all "fudge," and that when persons get sick they ought to be thankful for anything that will do them good. But by such prejudices we ought not, and will soon find that we *must not*, be guided. And those who hold them will, ere long, be classed in the same category with the surgeons who maintained that pain under their operation was a good thing, and therefore opposed the use of anæsthetics.

In the prosecution of this work (which I am happy to find is already occupying the attention of some of our pharmacutists,) I would throw in a caution as to the *size* of pills. It is easier generally to give two, or even half a dozen small ones, than to administer a *bolus*, which, if not a relic of barbarism, is at all events rather barbarous treatment.

As to the alkaloids, I am looking forward with confident anticipation to the time when we shall have in this form the active principles of nearly all our vegetable remedies, and hail every one brought forward as the harbinger of brighter days in store. And I do so because I see in these a greater certainty of nature and action, a more manageable form, and, paradoxical as it may appear, a less dangerous article; because here we can know what and what strength we are giving, which, either with the crude drug or the old extracts, would often resolve itself into a very difficult problem, unless ascertained by experimental administration of each individual specimen.

Then, as we have in this form the principles of a goodly number of our medicines, let us use them, and at the same time urge on our resources until we can command the whole in the same manner; and once fairly tried, they will not willingly thereafter be done without by any member of the profession.—*Phil. Med. and Surg. Reporter*, May 12.

Tape-Worms.

By E. C. DE PUY, M. D., of Freeport, Ill.

Was called, October 13th, 1859, to see Mrs. S., a pale, delicate woman, with a "dark, leaden appearance of the contour of the eyes," aged twenty-nine years—the mother of two children, the youngest five years old. Found her just recovering from an attack of convulsions.

After a careful examination for the cause of the attack, I could not find anything wrong, except some decayed teeth, which were very sore, and had troubled her for some time. The functions of the various organs, digestive

tube, lungs, heart, urinary and generative, were apparently healthy. As she complained of a peculiar sensation—epileptic aura—about her jaws, and running from them down the back of the neck, I was led to think the decayed teeth the cause of all her trouble. They were all extracted by her dentist, and she was put upon vegetable bitters and iron to improve her general health. Her appetite improved, and she said she felt better, only sometimes she was very nervous, and that ugly sensation about her jaws and neck troubled her some.

She remained thus until the night of the 25th of February, 1860, when she had three attacks of convulsions, which were relieved by tincture of gelsemium, fluid extract of scutellaria, chloric ether, (aa.), in teaspoonful doses, and chloric ether by inhalation; also, friction along the spinal column, with stimulating liniment. On the following morning another careful examination was made to ascertain the cause of the convulsions. The urine was tested for albumen by nitric acid and heat, and found perfectly free—no coagulum. The bowels moved every day, and appeared perfectly natural; function of the womb healthy. Ordered hydrocyanate of iron, 3 i.; extract of hyoscyamus, 3 i.; mucilage, q. s. to form mass—to be divided into 120 pills. Dose, one pill three times a day, to be increased according to the effect produced. Also, for her nervousness, fluid extract of scutellaria, 3 ii.; fluid extract of pruni virginianus, 3 i.; simple syrup, 3 i., in teaspoonful doses, as occasion required. Improving, but complains of a constant spitting of offensive mucous, insensibly rising up in her throat, which symptoms, taken in connection with the nervous phenomena, led me to suspect the presence of worms. To operate mildly upon the bowels, and partly as a vermifuge, she was ordered to take from three to five-grain doses, every four hours, of the following compound:—Podophyllin, 3 i.; pulv. Jamaica ginger, 3 i.; sugar of milk, 3 i. Mix intimately. Also, to take two-grain doses of quinine three times a day, for its tonic effect on the nervous system. The powders operated very mildly but effectually upon the bowels, producing very offensive stools, of the consistence of tar, mixed with flattened seybala, representing the appearance of having been retained in the bowels for some time; also, what we but little expected, a large number of pieces of tape-worm, from a single joint to half a yard in length. The powders were continued, as it was evident that they were doing good in breaking up the habitat of and otherwise disturbing the worm. The diet was very light—a little panada and wine.

After three or four days of such treatment, thinking that the worm was sufficiently exposed to be operated on by vermifuge or vermicide medicines, she was ordered a wine-glassful of the following decoction, to be taken every half hour or hour, as the stomach would bear, until all was taken:—Bark of pomegranate root, 3 ii.; boiling water, Oii. Steep down to one pint. To be followed, if the bowels were not much moved, or the worm not passed, by a dose of castor oil and turpentine.

Commenced taking the decoction about noon. At 11 o'clock at night the husband called and said that the decoction was all taken, and the bowels

had just moved, and he thought the worm had passed; and also that she was very faint, but free from pain, and otherwise comfortable, and desired to know if he should give the oil and turpentine. She was ordered a little wine and water, and rest until morning, when I visited her, and found that the bowels had just moved again, and that she was very comfortable. The last stool contained no more joints of the worm. The stool which passed at 11 o'clock contained the tape-worms (*tænia solium*), which I send you for the College Museum. The bowels have moved without purgative medicines since, and contain no more of the tape-worm.

The family are "good livers;" have not eaten much pork for years; they are natives of New York State. Have been in this city some four years. The patient now (March 15th, 1860,) says she feels better than she has for years. She is very nervous sometimes, but feels nothing of that drawing of her jaws and neck.

She is now taking the hydrocyanate of iron pills and Tilden's aromatic calasaya wine, as a tonic and preventive, as worms are supposed not to relish aromatic bitters. It is encouraging for the patient to know that there are fully as many "heads as tails" in the mass of worms which were passed.—*Chicago Medical Journal*, April, 1860.

Gelseminum in Fever.

By I. M. Goss, M. D., of Mulberry, Jackson County, Ga.

Having seen many discrepancies in regard to the real merits of this article, I will give in detail my personal experience with it. I have frequently noticed communications in the different eclectic journals, and in many of them the idea is conveyed that gelseminum will not permanently cure fever, without quinine or some other anti-periodic; and the writers advise that quinia should be given after the gelseminum. This may have appeared so to some; but my trials with it, recently, have convinced me to the contrary. The different opinions may have originated from the different preparations of the drug. There is a difference in the therapeutical value of different preparations of it; the extract has not proved as active in my hands as the tincture, particularly in fevers of a periodical character. The tincture of the dried root has not done with me as well as that of the fresh article. The first trials that I made of this medicine were with the extract, and then the tincture of the dried root, neither of which proved satisfactory to me, and I was ready to conclude that the medicine was overrated; but I have since been using a concentrated tincture of the fresh root, and now conclude that it has been underrated. Last fall I was frequently called to cases of remittent and intermittent fevers, which were of long standing, either from neglect or routine treatment. In one case I used all the usual anti-periodics, as cornine, bebeerine, quinia,

iron, &c., but without success. I gave the above in increased doses until I produced the specific effects upon the nervous system, as headache, buzzing in the ears, &c., but still the chills would return—sometimes every day, for a while, then every other day. Thus the case continued for several weeks, until I despaired of success with the other anti-periodics, so I determined to try the tincture of gelseminum. Accordingly, I left an ounce of the tincture of the fresh root, directing it to be given in doses of thirty drops every two or three hours, until the eyes were affected; then the medicine was suspended until that passed off, then again resumed as before, and so on, until the fever was broken. - I saw the patient just as his chill was gone off, and commenced the tincture of gelseminum immediately. The fever did not rise very high, nor continue long, nor did the chill ever return. The patient recovered from the time he commenced the gelseminum, and was soon up at his usual avocation. Now, what still more astonished me, was that the medicine never affected his eyes in the least, yet it suspended the chills immediately, after all the above-mentioned anti-periodics had totally failed, though they had been given in large doses—viz: five to ten grains per day, or more—for several weeks. I had frequently combined the tincture of gelseminum with the other anti-periodics before, and met with very prompt success; yet I attributed it to the other articles, but this time I determined to try the gelseminum alone.—*Eclectic Medical Journal*, May, 1860.

Case of Puerperal Fever.

By Dr. A. P. KNOWLTON, of Brecksville, Ohio.

I was called at 12 o'clock M., Jan. 14, 1860, to see Mrs. M., seven and a half months gone in her tenth pregnancy. Found her laboring under an acute attack of pleuro-pneumonia. Bled her thirty ounces at the arm before relief was obtained, then prescribed the following:—

R.—Hyd. chlo. mit.,.....gr. xv.
 Ant. et potas. tart.,.....gr. i.
 Morp. sulph.,.....gr. ij.
 M. ft. pulv.,.....No. v.

S. One to be taken every three hours.

Patient rested well till half-past 8 o'clock in the evening, when she was taken with labor pains, and her child born in less than an hour. The bowels were moved with oil and turpentine about 12 o'clock midnight.

Jan. 15th—Peritoneal inflammation supervened; pulse 130; lochia suppressed; tympanitis abdominalis; delirium; cold, clammy sweat; tongue loaded with dark brown coat; teeth with sordes. The following prescription made:—

R.—Pulv. ipecac.,.....gr. vj.
 Morph. sulph.,.....gr. iij. m.
 Ft. chart.,.....No. vi.

8. One to be given every four hours.

R.—Tilden's fluid extract veratrum viride.

9. Four drops to be given every four hours, alternately with the powders; also, abdomen fomented.

16th—Pulse 120; no other perceivable change; calomel, ipecac. morphia, continued the same; veratrum viride increased to five-drop doses; ung. hyd., half ounce, used in friction over abdomen, followed with warm turpentine.

17th—Pulse 75; abdomen much distended; increased tenderness on pressure; delirium and subsultus tendinum. The same treatment continued.

18th—Pulse 65; no other decided change; treatment the same.

19th—Symptoms in *statu quo*; treatment the same.

20th—Symptoms more favorable; little show of lochia; the same treatment continued.

21st—Patient decidedly better; lochia fully restored; veratrum viride continued in three-drop doses, alternated with morphia; beef tea ordered.

22d—Patient improving.

23d—Convalescent.—*Cleveland Medical Gazette.*

Ipecacuanha instead of Tartar Emetic in Croup.

By J. C. SHAPARD, M. D., of Flat Creek, Tenn.

I am strongly impressed with the opinion that much harm has resulted from the employment of tartar emetic in croup. It is but justice, however, to admit that this opinion is not the result of long experience or extensive observation. And, moreover, according to an ancient sage, an opinion is only the half-way house between ignorance and knowledge. I shall content myself with expressing the opinion, without attempting to estimate its value.

I think I have seen fatal prostration result from the use of tartar emetic in infantile cases, in my, own practice and in the practice of other physicians; physicians, too, who were regarded "skillful and scientific," and who deservedly rank high in the profession. That it was prescribed *scientifically* in the fatal cases alluded to, I have not a doubt—that is, that according to the "teaching" upon the subject it was *indicated* in those cases. It is the province of our teachers to lead the van of our profession, and give "the word of command." They tell us to use tartar emetic in croup; but in justice to them it must also be said they enjoin caution in its administration, and this injunction may not be sufficiently regarded by the subalterns in the professional army.

Among the pathological elements of croup are inflammation, with or without fibrinous effusion, and spasm. Tartar emetic, in sufficient doses, will arrest the inflammation, throw off the fibrinous product; but in accomplishing these results a dangerous prostration is much to be feared. And when we remember how many physicians there are who are more inclined to the

heroic than the prudent, it becomes a desideratum to find a remedy that will be as efficacious as the tartar emetic, without its dangers. According to M. Petit, ipecacuanha is that remedy.

M. Petit says, in a recent journal, he has been practising medicine in Paris fifty-two years, and that during this long career he has not lost a single case of croup. He treats the disease with emetics—generally ipecacuanha—tartar emetic *never*. He administers the ipecacuanha in syrup, in infusion, or in powder, according to the age or urgency of the case, but always in emetic doses. He prefers the ipecacuanha, because he considers it a superior emetic—because it can be administered in large doses with impunity—and for the reason that those who give their attention to the little patient are in no danger, through error or inexperience, of injuring it by heroic practice. He thinks it is the enemis that cures the croup—that the vomitings and efforts to vomit detach and throw off the false membranes—that the general shock and the perspiration produced by the vomitings modify the organism in such a manner as to prevent the formation of new false membranes. But in order to obtain these desirable results, he says it is necessary to insist on the emetic without the fear of fatiguing the little patient, as long as the indications for its use continue, and to return to it after having obtained these results should the croupal cough and dyspnœa return, without waiting for the respiration to become wheezing. And if the physician wishes to be sure of curing his patient, he should not content himself with prescribing the emetic, but he should administer it himself, or have it administered in his presence; and he should not leave the patient until the respiration is completely relieved, and it can rest easily in the horizontal position.

M. Petit has met with extraordinary success in the treatment of croup—greater, perhaps, than most other physicians have obtained from any treatment whatever, even the emetic plan; but his long-sustained eminent position is a guarantee of his good faith and scientific attainments; and although others might not be as successful with the ipecacuanha as he has been, yet I think its substitution for tartar emetic would lessen the mortality of croup.—*Nashville Journal of Med. and Surg.*

Selections.

EXTENSIVE OPERATIONS FOR THE CURE OF NEURALGIA.—Dr. Carnochan, of New York, whose surgical feats are very apt to find their way into the newspapers, has lately had a case that taxed his utmost skill and ingenuity. The patient had, for more than ten years, been a martyr to the most excruciating facial neuralgic pain, had been a patient in the New York Hospital, and been subject to every variety of medical and surgical treatment. No less than *fourteen* surgical operations were performed on his face by different surgeons, one of them by the venerable Dr. Valentine Mott, and six of them by Dr. Carnochan. In his first operation Dr. Carnochan laid open his face, trepanned

the maxillare, separated the trunk of the second branch of the fifth pair from its connections as far as the posterior part of the antrum, and exsected about an inch of the nervous trunk. This was followed by instant relief, and the patient was able to follow an active business for a year. At the expiration of this time, however, the pain returned, and the patient again sought Dr. C., who performed five more operations on him. The last, which promises to be successful, consisted of the exsection of the remaining stump of the trunk, close to the foramen rotundum, in immediate connection with the ganglion of Meckel—thus insulating that ganglion and its branches from the encephalon. One hardly knows, in this case, which to admire most, the bravery and fortitude of the patient, or the boldness and confidence of the surgeon.—*Phil. Med. and Surg. Reporter*, April 21.

ON THE LOCAL EMPLOYMENT OF CHLOROFORM IN THE REDUCTION OF DISLOCATIONS.—M. Orliac, a French provincial practitioner, relates two cases of recent dislocation of the shoulder, in which rapid and painless reduction was accomplished. This result he attributes to having surrounded the shoulder with, and placed in the axilla, compresses imbibed with ten or twelve grammes of chloroform, these being applied two or three minutes prior to and during the attempt at reduction. In this way, he observes, assistants may be dispensed with (an important matter in country practice), and pain be prevented, without any danger being incurred.—*Moniteur des Sciences Médicales*, and *Atlanta Med. and Surg. Journal*.

EMPLOYMENT OF SAMBUCUS NIGRA IN DROPSY.—M. Reyssie, a Belgian practitioner, states that he has long employed the juice of the root of the sambucus as an excellent purgative in dropsy. The bark of the fresh root must be detached by scraping, and the juice is extracted from the scrapings by pressure. The dose is a teaspoonful for an ordinary purgative; but as it does not cause colic or any other inconvenience, the quantity may, in the case of dropsy, be increased to a tablespoonful, which will often induce from twenty to thirty stools. It is a curious fact that the process of boiling, as in the preparation of a syrup, converts this purgative into a diuretic, which may also be of great use in dropsy.—*Revue Méd.*, and *Med. Times and Gazette*.

ILL EFFECTS OF TIGHT BANDAGING.—Dr. Dalton, of Aberdeen, in a letter to the editor of the *Buffalo Medical Journal*, relates a case in which a negro boy, aged sixteen, lost his leg from the effects of tight bandaging in a case of fracture. Dry gangrene followed, and amputation was rendered necessary. A somewhat similar case occurred in our own practice not long since, in which an ignorant practitioner, in treating a fracture of the arm in the case of an interesting little girl, applied the bandage so tight over a rude splint as to cause the death of the part. On our removing the bandage, a week after its application, gangrene and death of the arm was manifest, and, at our request, amputation was performed by Prof. Pope. Young surgeons should be especially careful in the application of bandages, to see that they are not too tight.—*St. Louis Med. and Surg. Journal*.

ALUM AS A REMEDY IN CROUP.—A correspondent of the *New Hampshire Journal of Medicine* states that for three years he has used alum in croup, and in all that time has not seen a fatal case which was treated with it from the beginning. He usually gives about ten grains, one in ten minutes, until vomiting is induced, using at the same time tartar emetic or the hive syrup freely—the latter subduing the inflammation, while alum has more of a repulsive action.—*St. Louis Med. and Surg. Journal*.

ILL EFFECTS OF QUININE.—Dr. Greenwald, of Cincinnati, reports a case, in the *Western Lancet*, in which decided and persistent hemiplegia was produced by the use of quinine. About twenty grains were administered in three doses, combined other remedies. The hemiplegia was preceded by ringing in the ears and a disposition to sleep. This case, with others on record, shows that the administration of quinine is not, under all circumstances, unattended with danger.—*Ibid*.

IODATE OF POTASSIUM IN AFFECTIONS OF THE MOUTH.—Induced by the great success that has attended the chlorate of potassium in affections of the mouth, MM. Demarquay have tried the efficacy of the iodate of potassium in numerous cases of diphtheritic and gangrenous stomatitis. The success has been considerable, and that in which the chlorate has failed. The dose employed was from four to eight grains.—*Moniteur des Hôpitaux, and Georgia Med. and Surg. Encyclopedia*.

TOBACCO was prohibited in the Philadelphia county prison nearly a year ago, and has been found beneficial and satisfactory in its influence. Many of the prisoners, who were refractory at first, have become accustomed to the privation, and express themselves satisfied with the beneficial effect of the regulation. The procedure is suggested to similar institutions in other States.

CHLOROFORM IN SLEEPLESSNESS.—Fonssagrives recommends (*Bull. de Thér.*, 46, p. 401,) 5-10 drops of chloroform in mucilaginous mixture, in agrypny, when opiates are ineffectual or contra-indicated.—*Phil. Med. and Surg. Reporter, April 7*.

SULPHATE OF COPPER WITH OPIUM IN DIARRHŒA FROM TEETHING.—Among other therapeutical news, we notice, in a recent number of *Schmidt's Jahrbücher*, the following formula, which Prof. Eisenmann, of Würzburg, has found very efficient in diarrhœa of children from teething, viz:—Cupri sulphat., $\frac{1}{2}$ gr.; pulv. opii., $\frac{1}{4}$ gr.; pulv. sacch., q. s. Three times daily one such powder.—*Ibid*.

"EXTRACTUM SANGUINI."—Dr. Foy (*Bull. de Thér.*, 62, p. 121,) recommends of the extract sanguinis of calves, oxen, and lambs in all anæmic condition (as chlorosis.) He directed the preparation of gelatine capsules (with ten parts of extract sang. to one of sod. phosphit.), each containing from four to eight grains, of which he gives ten, fifteen, and sometimes twenty a day.—*Ibid*.

RELIEF OF THE TENESMUS OF DYSENTERY.—Ansaloni, in his inaugural dissertation, reports the very favorable results obtained by Dr. Leclerc, of Tours, by the combined employment of belladonna, or stramonium and calomel, in dysentery. A large plaster of extract of belladonna, or stramonii ($\frac{3}{4}$ iss.), is placed on the regio pubis, and every morning and evening for a few days a grain and a half of calomel administered. The belladonna and stramonium may be alternated. Tenesmus soon yields to this treatment, as well as all other symptoms of dysentery.—*Phil. Med. and Surg. Reporter*.

JUICE OF CHELIDONIUM MAJUS has been locally applied with the most satisfactory results in cases of great itching eczema, injuries from the nettles, and other itching diseases of the skin, by Grand-Clement (*Bull. de Thérap.*, 46, p. 336.) Mixed with an equal quantity of glycerine, it can be preserved and used for the same purpose at times when the fresh plant cannot be obtained.—*Ibid.*

THE TEA PLANT is cultivated in Louisiana without any difficulty. It has shown its power to withstand the hottest days of Louisiana, also the late freezing weather.—*Hygienic and Literary Magazine*.

ABSURDITIES.—To attempt to borrow money on the plea of extreme poverty. To judge of people's piety by their attendance upon church.—*Ibid.*

P h a r m a c y .

FLUID EXTRACT OF MARSH ROSEMARY.

(*Statice Caroliniana*.)

Marsh rosemary is exclusively a maritime plant; it is one of the few ornamental species of the salt marshes, and is very conspicuous for its purple tops among the grass during the summer months. The root is the official part, and is one of the most powerful astringents of our indigenous materia medica, possessing valuable antiseptic properties. Few vegetable substances, when chemically treated, give more distinct evidence of the presence of tannin—as high as twelve per cent by some who have analyzed it. The therapeutical uses of the root, therefore, are those of the most powerful astringents, and has long been in popular use in diarrhea, dysentery, aphthous ulcerative affections of the mouth and fauces; and from its astringent and antiseptic quality it is peculiarly suited to correct the state of these local maladies, is said to be better suited than *Coptis trifolia*, and is often combined with it on account of the tonic bitter of the latter.

Dr. Mott regarded it highly in dysentery, after the acute stages had passed—often with success, after various tonics and astringents had been used with no effect. In cynanche maligna, or putrid sore-throat, it is used as a gargle, and is frequently applied to the piles; and as an injection in chronic gonorrhoea, leucorrhoea, &c.

It has been chiefly used in the form of a decoction, sometime in the form of tincture. Its highly valuable properties suggests a more uniform preparation, in the form of a fluid extract, which may be made as follows:—

℞.—Marsh rosemary root,..... 1 pound.
Alcohol, of sp. gr., 871..... q. s.

Reduce the root to a coarse powder, moisten with alcohol, then pack in a percolator, and cover it with alcohol of the above strength; allow it to digest three days, then displace gradually—returning to the displacer the first runnings, until twelve fluid ounces shall have passed. Continue the displacement with additional portions of fresh menstruum, until fully exhausted, which evaporate in a vacuum to four fluid ounces, and mix with the reserved, producing one pint of fluid extract.

The dose of the powder, estimated at ten to thirty grains, gives as a dose of fluid extract ten to thirty minims.

PILULÆ HYDRARGYRI.

A recent lot of blue mass gave the following *highly* medicinal component parts:—

Mercury,.....	7½ grains.
Earthy clay,.....	27 “
Prussian blue,.....	1½ “
Lard,.....	2 “
Soluble saccharine matter,.....	84 “
Insoluble organic “.....	12 “
Water,.....	16 “

One-third of mercury would have given 83½ grains. Sulphate of mercury was found in it, which was doubtless occasioned by the endeavor to heighten the color of the conserve of roses by means of sulphuric acid.

This is commended to the consideration of those who wish cheap medicines, and imported preparations. J.

FLUID EXTRACT OF CLEAVERS.

(*Galium Aparine.*)

Cleavers have, with many, been held in high repute in many diseases of the urinary organs, as suppression of urine, calculous affections, inflammation of the kidneys and bladder, and scalding of the urine in gonorrhea. On account of its refrigerant and sedative properties it is contra-indicated in diseases of a passive character, but is recommended in fevers and acute diseases.

A fluid extract has been suggested as the most convenient form of administration, as follows:—

℞.—Cleavers, in coarse powder,..... 16 ounces.
Diluted alcohol, of sp. gr. 896,..... q. s.
Sugar,..... 3 ounces.

Moisten the coarsely powdered cleavers with the menstruum, then pack in a displacement apparatus, and cover with the menstruum; allow them to remain forty-eight hours; draw off and set aside twelve fluid ounces, and continue the displacement until what passes has none of the bitter or acrid taste peculiar to the plant; evaporate in a vacuum to eight ounces, to which add the sugar, and dissolve; then continue the evaporation to four fluid ounces, and add to the twelve ounces previously reserved, making sixteen ounces of fluid extract.

Dose, from one to two fluid drams.

FLUID EXTRACT OF FROSTWORT.

(*Helianthemum Canadense.*)

This plant is familiarly known as rock rose, frost weed, frost plant, and as *cistus canadense*--possessing tonic, astringent and alterative properties. It has acquired reputation as a remedy in scrofula, some well-marked cases having been cured by it. In secondary syphilis, either alone or in combination with other alteratives, as corydalis and stillingia, or compound sarsaparilla, or alternated with hydriodate of potassa, it has been used with much satisfaction by the profession; and mention is made of its beneficial effects in scrofulous ophthalmia and in some cutaneous diseases.

A fluid extract is prepared as follows:—

R.—Frostwort,	16 ounces.
Diluted alcohol, of sp. gr. 889,	q. s.
White sugar,	2 ounces.

Reduce the plant to a coarse powder, moisten with alcohol of above sp. gr., and then pack in a displacer, and cover with diluted alcohol as directed. Allow it to remain forty-eight hours, then displace with diluted alcohol of strength directed until exhausted; reserve twelve ounces of first runnings, evaporate six fluid ounces, add the sugar, and continue the evaporation to four ounces; then mix with the reserved, and strain or allow it to settle.

The dose is from one to two fluid drams.

FORMULÆ FOR PILE OINTMENT.

Furnished by Dr. J. C. Gray, of Mount Vernon, Jefferson Co., Ill

The following formula I have used in my practice for nearly twenty years, with the most satisfactory results. You are at liberty to publish them if you see proper, viz:—

R.—Carbonas plumbi, pulv,	5 ss.
Pulv. opii,	3j.
Ungt. stramonium,	3j.

The ingredients should be well incorporated.

Apply three or four times a day; the parts should be thoroughly cleansed with warm water before each application. As a local remedy I have seldom found it necessary to resort to any other, and in recent cases it has seldom,

and as far as I can recollect, never failed to give prompt relief. In cases of long standing, I usually prescribe twenty drops balsam copaiba three or four times a day.

For the last two years I have used the following, instead of the liquid balsam, and which, I think, is decidedly better:—

R.—Balsam copaiba, 10^{grains}.
Podophyllin, 1-2 grain.

To be taken two or three times a day—the object being to move the bowels gently each day, the dose should be regulated accordingly.

W. S. LOVE'S OLIVE PLASTER.

R.—Pix burgundica, lbj.
Terebinthina, lbjss.
Styrax, puri, ℥j.
Galbanum prep., ℥iv.
Ext. balladonna, ℥iv.
Pix liquida, ℥j.
Pulv. G. opii, ℥ij.
Pulv. capsici, ℥ss.
Tart. ant. et potas. 3 ij.
Ol. menthæ sat. ℥j.
Ferri subcarbon, 3 iv.

[The Druggist.

PIERLOT'S VALERIANATE OF AMMONIA.

The originator finds, from his experiments, that fresh valerian roots contain about one per cent. of acid. The object of his formula, is to furnish the preparation in a form that may be kept, and that will bear the same relation to the salt that the spirits of mindererus bear to the acetate of ammonia.

R.—Acid. valerianic hydrat. 3 grammes.
Liquor ammoniæ fortiss, 1 “
Extract valerianæ alcohol, 2 “
Aquæ distillatæ, 94 “

100

Dose, for adults, from one to three teaspoonful daily, along with a little sugar water.—*Jour. and Trans. Maryland Col. of Pharmacy.*

TO RENDER CHLORINE GAS INNOCUOUS.—Prof. Bolley recommends a solution of *anilin* in water, a few drops of which on a handkerchief, and at times applied to the nostrils, will enable a workman to tolerate the action of the chlorine upon the lungs.—*Druggists' Circular.*

E d i t o r i a l .

AMERICAN MEDICAL ASSOCIATION.—The thirteenth annual meeting of this association will assemble at New Haven, Conn., on the first Tuesday of June, in accordance with the official notice, which has been published and the adjournment of last year. It is understood that many questions will come before this meeting of importance to the medical profession, which will cause an unusually large attendance from each State, and promises to make this the most important that has been held for many years.

As this meeting is to be inaugurated the sectional division of the body for scientific purposes, and a reference of any question to the appropriate section or committee to consider and report. We shall give a synopsis of its proceedings in our next issue. It is suggested by Dr. Reese, to compliment New York by the nomination of Prof. Valentine Mott as the next president, a compliment deserving one who has earned the highest honors the American profession are able to bestow.

BERKSHIRE MEDICAL INSTITUTION.—We ask the attention of the profession to the annual announcement of the Berkshire Medical Institution. This is an old and favorably known institution, under the charge of an able corps of lecturers whose reputation ought to secure to it a full share of patronage. It is situated in the beautiful and healthy village of Pittsfield, Mass., than which no place offers greater inducements to those who desire a more retired and cool residence than the cities afford for the summer months.

HYGIENIC AND LITERARY MAGAZINE.—This is an octavo journal of sixty-four pages, devoted to hygienic, literary and educational instruction, and ought to secure the patronage of the public generally in the Southern latitude. It is well conducted, replete with interesting matter, its several departments being in charge of persons of professional and literary reputation—Dr. Taliaferro, the hygienic; Mrs. Dr. Riley, the literary, and Mr. Malsby, the educational. Every enterprise of a new journal is subject to the lights and shadows of all business enterprises, and the remarks we herewith quote from the April number are equally applicable to all sections of the country, and are the experience, we doubt not, of many a journalist:—

"The great cause of so many enterprises going down is simply for the want of support. Resolution after resolution is passed by enthusiastic communities, advocating home enterprises, independent trade, Southern institutions, and making a great harangue about building up facilities in our midst; but when the agent or editor of a Southern enterprise presents his claims to their patronage, and asks support, their enthusiasm becomes mild, their zeal is very *prudent*, their boisterousness, like the calming eruptions of Vesuvius, subsides to the gentle murmurs, somewhat resembling a language of this kind: 'I love to see such things going on; I hope you will succeed; we have been dependent long enough; the South ought to come to your help—but *I don't feel inclined to take the work just now*; my expenses are *rather* heavy this year; perhaps I may remember your journal the next year.' And the individual walks away, to curse and abuse Northern institutions, abolitionists, and everything north of Mason & Dixon's line—but sits for hours reading, pouring over the pages of some New York, Boston, Philadelphia, or London papers or magazines, while you and your enterprise may go to the ———, Tom Walker, or some where else. We have no comment to make upon such persons or their patriotism."

PROF. W. F. WESTMORELAND'S NEW INSTRUMENT.—At the recent meeting of the Medical Association of Georgia, Dr. W. F. Westmoreland, Professor of Surgery in the Atlanta Medical College, presented a new *urethrotome*, of his own invention, intended specially for the section of strictures of the urethra, without the necessity of dilation. There are many cases of this character, which proves exceedingly difficult to manage, and indeed are among the most annoying to the sufferer, as well as to the surgeon. With this instrument the section can be successfully and safely made in cases where the No. 1 bougie cannot be passed. The advantage claimed for this instrument, in its construction, is a small director, which may be introduced through any stricture that is not absolutely impenetrable. This instrument has already been practically and successfully tested in Prof. Westmoreland's hands, and a report of cases and cut of the instrument will shortly appear in this journal. In the meantime, should any gentleman desire to obtain the instrument, it can be had of Tiemann, New York city, the manufacturer.—*Atlanta Med. and Surg. Jour.*

GEORGIA MEDICAL AND SURGICAL ENCYCLOPEDIA.—This is the title of a new journal, just issued at Sandersville, Ga., at \$2 a year, and edited by Drs. Hollifield and Newsome, the first number of which we have received. Its general appearance and execution is equal to any of our exchanges, while its original and selected matter are of a character to commend it to the favorable consideration of the profession; and from what we know of the gentlemen who have it in charge, we have no doubt they will make it all they intend—a “repository worthy of the support of the man of taste and information.”

MIDDLE GEORGIA MEDICAL COLLEGE.—We have received the announcement of this institution, recently organized at Griffin, Ga. This is the fourth medical college regularly conducted in Georgia. For particulars, see announcement.

UVA URSI.—Mr. Cyrus Hendricks, Jr., of Litchfield Corners, Me., writes to us as follows:—“I have employed uva ursi six times in lingering labor and abortion, with good effect. I used one ounce of uva ursi to one pint of boiling water, giving half an ounce every fifteen minutes.”

DIAGRAM OF THE ECLIPSE OF THE SUN, JULY 18.—Prof. Asa Smith has issued a chart or diagram, giving a correct representation of the eclipse of the sun, which is to take place on the 18th of July. The following is the explanation of the diagram, as given by Prof. Smith:—

“This diagram is a correct representation of the eclipse of the sun which will take place on the 18th of July, 1860, as seen from all parts of the United States and Canada, as it will appear at the time of its greatest obscuration, except that the sun will be less eclipsed at all places south of the parallel of latitude of the city of New York, and the eclipse will be greater at all places north of this parallel than is represented in this diagram—hence, at Philadelphia, Washington, Pittsburgh, Columbus, Indianapolis, Springfield (Ill.), and St. Louis, the eclipse will be a little less than here represented; but at Boston, Portland, Concord, Montpelier, Hartford, New Haven, Albany, Rochester, Buffalo, Chicago, &c., it will be more eclipsed than is represented in the diagram.”

A copy would be sent to any address, by enclosing one dime and a three cent piece to Asa Smith, Post Office, station E, Eighth avenue, New York.

THE
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JULY, 1860.

[No. 7.

Indigenous Tonics.

BY CHARLES A. LEE, M. D.

NUMBER VII.

EUPATORIUM PERFOLIATUM. (L.)

(*Thoroughwort—Bonset—Feverwort, &c.*) Natural Order, *Compositæ*; Linnean System, *Syngenesia*.

THE order *Asteraceæ* of Lindley (*compositæ*) is one of the most extensive, as well as natural, families of the vegetable kingdom; easily recognized by its syngenesious stamens and capitate flowers. It includes not less than one-tenth of the entire vegetable kingdom—made up of shrubs, or herbs, rarely of trees, and found in all parts of the world. De Candolle describes 8,523 plants of this order—of which 1,229 were annuals, 2,443 biennials, 2,491 perennials, 2,264 suffruticose, 366 shrubs, 72 small trees, 4 large trees, 81 woody plants, 126 climbers; and of 1,201 little is known. Of these, 3,590 were discovered in America, 2,224 in Africa, 1,827 in Asia, 1,042 in Europe, and 349 in the South Sea islands—constituting from one-half to one-sixteenth of the vegetable kingdom, as found in different countries.

According to Lindley, there is a bitterness peculiar to all *compositæ*, and in the *corymbifera*—one of the three divisions of the order—it is combined with a resinous principle. Where this lat-

ter is united to a bitter principle, we find the plant possessing tonic, stomachic and febrifugal qualities, as in tussilago, tansy, burdock, May-weed, chamomile, elecampane, golden rod, *matricaria parthenium*, *eupatorium*, &c. The stimulating properties are augmented in proportion as the resinous principle is increased. Some become anthelmintics, as *artemisia*, *veronia*, tansy and *santolina*; others emmenagogues, as *matricaria*, *achillea* and *artemisia*. Some have decided diaphoretic properties, as *eupatorium*, *achillea*, *arnica*, *artemisia*, *solidago* and *calendula*; others are very useful as diuretics, as *erigeron*, *liatris*; and some are both diaphoretic and diuretic. Some are characterized by intense bitterness, while the unexpanded leaves or receptacles of some species are used as wholesome articles of food, as the artichoke, &c. The *cichoraceæ*, another division of this order, have usually a milky, bitter, astringent and narcotic juice, as in succory, endive, common lettuce, *lactuca virosa*, *tragapagon* (salsafy), *leontodon*, *cardamus*, *bellis*, &c.

The *eupatorium* is a very extensive genus, abounding especially in North America. We have at least sixteen species in the Northern States, and probably as many more in other parts of the Union. The plant is well known from its simple or rarely divided leaves, opposite, or sometimes alternate or verticillate; flowers generally in corymbs, of a purple, white or blue color. The leaves are often covered with resinous dots. The stem of the *E. perfoliatum* is villous, hirsute, cylindrical; the leaves opposite, connate, perfoliate, oblong, tapering, acute, serrate, rough above, tomentose beneath; heads about ten-flowered. The root is perennial, horizontal, crooked, sending up many erect stems, which are simple at base, branched above, round, hairy, and of a grayish-green color. The plant, however, is too well known to need further description. Botanists describe several varieties of the plant, distinguished by greater or less pubescence of the leaves, and one in which the leaves are ternate. The boneset abounds in low marshy grounds throughout the United States—flowering in August, and continuing in blossom till October. The whole plant is officinal.

Physical Properties and Chemical Composition.—The whole plant is intensely bitter, having a peculiar flavor, but without astringency or acrimony. The odor is but slight, and it yields its sen-

sible and medicinal properties to water and alcohol. The medicinal constituents of this plant have never been accurately known till the recent analysis in your laboratory. It was supposed to possess a bitter proximate principle, which was imparted to water and alcohol, and, also from its odor, a small amount of volatile oil. Your analysis gives of—

	Per Cent.
Organic Matters,	6329.28 90.418
Inorganic "	670.72 9.582
Total,	7000.00 100,000
	Per Cent.
Albumen,	163.86 2.338
Gum,	340.00 4.857
Starch,	650.08 9.286
Extractive,	321.12 4.587
Coloring Matter,	276.00 3.942
Bitter Principle,	336.00 4.800
Sugar,	84.64 1.209
Chlorophylle,	617.44 8.820
Black Resin,	247.52 3.536
Soluble Salts,	523.52 7.478
Insoluble "	147.20 2.104
Lignin,	3263.12 47.048
Total,	7000.00 100,000

The large amount of resinous and bitter principles in the plant is worthy of particular note, while no volatile oil or tannin is detected in it. Bigelow, however, supposed it contained some astringent matter, inasmuch as a slight precipitate was produced from its tincture, by adding a solution of isinglass; and Eberle states that the decoction forms copious precipitates with muriate of tin, nitrate of mercury, nitrate of silver, and acetate of lead. Experiments have sufficiently demonstrated that the leaves are the most active parts of the plant. From the large quantity of starch and gum contained in the plant, the decoction is very liable to decomposition. Rafinesque states that the eupatorium contains a peculiar brown, bitter, resiniform substance, which he calls *eupatorine*, soluble in water and alcohol, forming salts with the vegetable and mineral acids. It is very probable that the bitter principle of this species is an alkaloid, though it certainly is not

easily isolated. M. Righini discovered a peculiar alkaloid in the *eupatorium cannabinum*, in 1828, to which he also gave the name eupatorine, and which he regarded as the active principle of the plant. It presents the form of a white powder—has a taste *sui generis*; is insoluble in water, soluble in sulphuric ether and diluted alcohol. It swells in the fire and burns. It combines with sulphuric acid, and crystallizes in needles. There is good reason to believe that a similar principle exists in several of our native species of the plant.

Therapeutical Properties and-Uses.—This plant has a diversity of properties, and will fulfill a variety of indications, according to the dose and mode of exhibition. Thus it is diuretic, diaphoretic, purgative, emetic, expectorant, alterative, and tonic; and either of these effects may ordinarily be produced with great certainty, provided it be given in a suitable manner. In the early history of our country it was very generally used in popular practice, as a domestic remedy, for colds and catarrhal affections, for which it is still a favorite remedy. It was from its great success in relieving the pain attendant upon an epidemic form of influenza that it received the popular title of *boneset*, as the fever accompanying the disease was called *break-bone fever*. The power, however, of relieving pains in the limbs and general muscular system, which belongs to the eupatorium, is not dependent on any specific virtues of the plant, but is common, in a greater or less degree, to all diaphoretics, and especially to the hot infusions of such vegetables as combine a bitter with a resinoid principle, like chamomile, May-weed, golden rod, &c. With regard to the use of this plant in influenza, whether sporadic or epidemic, we have found it possessing great efficacy—relieving the pain of the back and limbs, as well as the general lassitude, with great promptness; for although in this disease the skin is often bathed in perspiration, yet it is of a morbid character—the surface being pale and morbidly sensitive, and the excretion of a passive kind. Where the secretions are of this morbid nature, and the pulmonary system is involved, the boneset has proved in our hands a most valuable remedy, inducing a healthy and free perspiratory discharge, and replacing the chilly or febrile sensations with a uniform and healthy glow. In such cases it acts very efficiently as an expectorant, and proves as powerfully remedial as can be

expected from any single remedy whatever. Much, indeed, might be said of its influence over the nervous system, and its powers in typhoid pneumonia, and the pulmonary complications of epidemic influenza, particularly among the aged, but we are now more particularly concerned with its tonic properties.

This plant was in general use among the aborigines of this country, on its first discovery, as a remedy for intermittent fever, and was accordingly adopted by the whites for the cure of the same disease. Whether it proved successful or not depended very much on the mode of its administration. Sometimes it would arrest the disease, if freely given in warm decoction, just before the expected recurrence of the paroxysm, proving emetic or emetico-cathartic; and in other cases it would prove successful if given in cold decoction or the powdered plant, at frequent intervals between the paroxysms; but in a majority of cases it failed to subdue the disease, and since the introduction of quinine it has been almost wholly set aside by the regular practitioner in the treatment of malarial fevers, except as an emetic and diaphoretic.* In the year 1812, thorough trial was made with this remedy in the treatment of intermittents, in the New York Almshouse, it being substituted for the Peruvian bark, which was then

* The native bitters which have been most extensively used in this country for the cure of intermittents are the bark of the *cornus florida*, or dog-wood; *liriodendron tulipefera*, tulip tree; *cerasus serotina*, wild cherry; *sabbatia angularis*, American centaury, and the *eupatorium perfoliatum*. In regard to these substances it cannot be doubted that they have all proved more or less successful, but generally after the disease has continued for some time, and kept up partly by habit and partly by debility. Dr. Drake thinks that the best time for using them is the period of restoration after the paroxysms have been interrupted by other means. Of these, the *cornus* undoubtedly ranks first as an anti-periodic, although the testimony in favor of the *eupatorium* is much fuller, as this writer remarks, than that bearing on the dog-wood. In travelling through the West, we have found many physicians who placed great reliance on it in intermittents, using it in the form of the saturated tincture, in dram doses every hour between the paroxysms. Dr. Drake thinks it probable, from the accounts he received from Western and Southern physicians, that the plant contains a peculiar principle, resembling quinine in its effects upon the body. We fully agree with this writer that in a country of such vast extent as ours, many parts of which, from their topographical structure, must forever remain subject to intermittent fever, it should be regarded as a duty of patriotism and humanity to test, by exhibition and analysis, such of our indigenous plants as, in their sensible qualities, bear any resemblance to the cinchona. He who should discover in our country a substitute for the bark would be honored as a public benefactor.

used in substance, and, it is stated, with uniform success. The cases, however, must have been of a very mild form. The same authority (Dr. Anderson) states that it was also extensively employed about that time, in the public institutions of New York, in remittent and yellow fever, in typhus pneumonia, catarrhal fevers, several cutaneous affections, in dropsies, and for the removal of mere debility; and by properly regulating the administration of the medicine, he remarks, that it fulfilled successfully all these indications, and exerted a decided curative effect. Drs. Bard and Hosack thought very favorably of the boneset as a diaphoretic, and were in the habit of frequently prescribing it in the above affections, but generally as auxiliary to more powerful remedies. Its power as an anti-periodic is comparatively feeble; but the cold infusion will answer all the purposes of the bitter tonics. As it has but slight influence in augmenting the action of the heart and arteries, it may be employed with advantage in almost every variety of inflammatory action. In the atonic forms of dyspepsia and general debility it is relied on by many practitioners as an efficient remedy; many think, however, that it is more apt to cause irritation of the stomach than quassia, gentian, or colombo. This might be expected from the large amount of resinous matter contained in it. In that form of indigestion consequent on the use of alcoholic drinks, it has proved highly beneficial, as well as that of old people—giving tone to the digestive organs, invigorating the assimilating functions, while it restores the skin to a healthy condition. Its laxative properties also, combined with its tonic power, renders it well suited to such cases. Its alterative properties, which have recommended it in certain cutaneous affections, are solely dependent on its tonic power, and are by no means strongly marked. Its efficacy in certain forms of dropsy has been dwelt upon by some writers; at present it is rarely used in this disease, other more active medicines having superseded it. As it tends to invigorate the functions generally, it would be strange, indeed, if it had no curative power in such affections. The eupatorium has been extolled in a variety of affections as a tonic alterative, and doubtless it possesses qualities which entitle it to consideration. Dr. Thacher, who had tried it extensively in various diseases, says that in anasarclous swellings

of the extremities, depending on general debility, the alcoholic tincture of the plant may be safely recommended as an excellent tonic. Dr. Burgon, of Pennsylvania, praises it very highly in cases of anorexia consequent to drunkenness. "In such cases," he says, "I have used a cold infusion with evident benefit, and I prefer it to any article I have hitherto employed; it very speedily restores the tone of the stomach, and no unpleasant effects follow its administration." Dr. Bigelow speaks highly of its good effects as a tonic in loss of appetite and other dyspeptic symptoms, as well as in general debility. Dr. Eberle states that he has found it particularly useful in very old people laboring under indigestion; that it gives tone to the stomach, and renders the skin soft and comfortable. He also praises it as an excellent substitute for chamomile tea, to promote the operation of an emetic. We have seen excellent effects from the cold infusion of this plant, taken as a prophylactic, in malarious districts, against fever and ague; also as a stomachic tonic, in the form of tincture. Dr. Zollickofer thinks there is no indigenous vegetable production of the United States that is more deserving the attention of physicians than this; that it possesses medicinal virtues which are admirably adapted to a variety of affections, and that in conjunction with sup. tart. potassa it is one of the most valuable and efficient remedies in *tinea capitis*. Rafinesque states that it appears to be superior to chamomile as a sudorific tonic, and preferable to cinchona in the treatment of the local autumnal fevers of the country, and that he has seen them cured by it when other tonic remedies failed. This writer also says that no other tonic of equal activity can be exhibited in fevers with less danger of increasing excitement or producing congestion, the only objection to its use being its nauseous and disagreeable taste, but that this may be obviated by combining it with aromatics. This last suggestion we have found a valuable one, and especially where there is any gastric irritability present.

Preparations.—Fluid extract, solid extract, eupatorin, eupurpurin, pills, tincture, infusion, compound infusion, syrup, powder.

The *fluid extract* is the best preparation for general use as a tonic and tonic alterative, in doses of from one to two drams. It is concentrated, and combines all the remedial virtues of the plant, and in a form easily administered to children. It should

be given in a diluted state, and may be flavored with any of the aromatic essences.

The *solid extract* is a good form when it is expedient to combine other substances with it, as blue mass, calomel, ipecac, henbane, &c. Dose, five to twenty grains.

The *eupatorin*, the bitter alkaloid extract, is an admirable form in intermittents, and also in atonic dyspepsia and general debility, and may be given in pill or powder, and in such combinations as are desirable.

The *eupurpurin*, which is a union of the bitter extractive (eupatorin) and the resinous principle, is more stimulating than the former, and is best adapted for alterative purposes. The dose is from three to four grains.

The *infusion*, made with an ounce of boneset to a pint of boiling water, is, in many cases, a very eligible preparation, in a dose of one or two fluid ounces at suitable intervals. In chronic cases, where a tonico-alterative effect is desired, it should be given cold every six hours, but as an anti-periodic in intermittents the dose should be repeated at least every two hours. As a diaphoretic, the warm infusion is to be drunk pretty freely—in some cases to the point of emesis, and afterwards often enough to keep up a free perspiration. Six or eight ounces will be required of a strong infusion to produce free vomiting; half this quantity generally proves cathartic.

The *decoction* is prepared by boiling one ounce of the plant in a pint and a half of water down to a pint, of which a wine-glassful usually operates as an emetic and cathartic.

A *compound infusion*, very useful in hectic and other cases, may be prepared by taking of boneset and sage, each half an ounce; cascarilla, one dram; boiling water, one pint and a half. Infuse till cold, and strain. A wine-glassful every three or four hours. Or, the compound infusion may be prepared by mixing together six ounces of the fluid extract with one dram of fluid extract of cascarilla. Dose, two to three ounces.

A *syrup* of this plant is best made by adding four ounces of the fluid extract to ten ounces of simple syrup, of which a suitable dose would be from two to four drams. This is well suited to pulmonic affections in old people, and also to typhoid pneumonia. The *powder* is the most objectionable form of all. It is

usually given in doses of twenty to thirty grains, or more; but it is seldom recommended in this form.

The following compound has recently been recommended in renal affections, and it is said with very satisfactory results:—Eupurpurin, two scruples; xanthoxilin, one scruple; strychnia, one grain. Divide into twenty powders. Dose: one, three, or four times a day, in suppression of the urine, torpor or paralysis of the kidneys or bladder, rheumatism, hepatic torpor, &c.

Other Species.—We have at least sixteen species of eupatorium growing in the Northern and Middle States, of which several are known to possess medicinal properties equal to the *E. perfoliatum*. Of these, the

Eupatoreum purpureum, or *gravel plant*, is one of the best known, and perhaps most generally employed. The plant has purple flowers, and, like the former, grows in swamps and other low grounds, from Canada to Virginia, and flowers in August and September. The root is the part employed in medicine—having a bitter, aromatic and astringent taste. It operates on the kidneys and urinary organs generally, and has considerable reputation in gravelly affections. It is said to be more effectual in the removal of uric acid deposits than of other calculous formations. It has been successfully employed in chronic cystitis and urethritis, and in atonic conditions of the genito-urinary organs generally. It is believed, by those who have made it the subject of experiment, to promote renal depuration, while it exerts a decided curative action in hæmaturia and strangury. In dropsy, also, it has considerable reputation, especially among the eclectics, who suppose that in addition to its diuretic properties it stimulates the absorbent vessels. They also place great reliance upon it in dysentery, hæmoptysis, hæmatemesis, and other hemorrhages—giving it in doses of two to five grains every hour or two, according to circumstances. As an expectorant in asthma, catarrh, whooping cough, influenza, bronchitis, and other pulmonary affections, this plant has long been celebrated. The preparations are the same as those of the last species.

Eupatoreum Teucrifolium—(Willdenow)—*Wild Horehound*.—This indigenous perennial has an herbaceous stem, with ovate, acute, scabrous leaves, and small white flowers, and grows in low, wet places, from New England to Florida—flowering from

August to November. The whole plant is employed. Its sensible properties are very similar to those of the *E. perfoliatum*, though considerably less bitter and disagreeable. It is aperient, diuretic, tonic and diaphoretic, and is in very general use at the South in the treatment of intermittent and remittent fevers. According to Dr. Jones, of Georgia, it is a good substitute for quinine in malarious diseases, being tonic, diaphoretic, diuretic, and slightly cathartic. He recommends four ounces of the infusion, made with an ounce of the dried leaves to a pint of water, every four or six hours, between the paroxysms. (*See Coxe's Am. Dis.*, p. 7.)

The *E. ageritoides* (*white snake-root*), and the *E. aromaticum*, possess medicinal properties, entitling them to greater attention than they have yet received from the profession.

Atropa Belladonna.

(BELLADONNA—DEADLY NIGHTSHADE.)

[Continued.]

BELLADONNA is a poisonous plant, all whose parts exhale a disagreeable, nauseous odor. The berries are the most dangerous part, because of the fatal mistakes they are likely to cause. In truth, in their maturity, they bear a strong resemblance to small cherries, and both children and adults have not infrequently fallen victims to the mistake. We can conceive how such accidents have occurred, since the fruit when fully ripe has a sweetish taste—insipid, it is true, but no way disagreeable. Two remarkable instances of poisoning by Belladonna are on record: that of forty children of Pitić, who were poisoned by eating the berries in the garden of the king, in 1773; the other, that of a hundred and fifty soldiers who became victims of a similar mistake. However, it appears to be conceded that death does not ensue unless the berries are eaten in large quantities.

But the fruit is not the only poisonous part of the plant—the root is justly considered the most active portion. The results of chemical investigation come to the support of this opinion; for it has been shown that in a given quantity of the root with an

equal amount of the fruit, the former contains a greater proportion of atropine than the latter.

The extensive use that has been made of Belladonna in therapeutics, and the many mistakes that have occurred by its administration, have given frequent occasion and opportunity to study the physiological and toxical effects of the plant, and its preparations on man. In a small quantity, on whatever organic surface it may be applied—on the skin surrounding the orbit of the eye, on the conjunctiva, on a blistered surface, or introduced into the stomach—Belladonna produces dilatation of the pupil, an effect which can take place without derangement of the regular functions. As Christison has remarked, in his "Treatise on Poisons," the dilatation which is produced by the application of Belladonna to the surroundings of the eye, is not often accompanied by trouble in the vision. This experience is confirmed by numerous observers, but yet the sight is usually obscured when the agent, introduced internally, has brought about the dilatation, sometimes even to complete blindness. This effect on the eyes may continue one, two, or three days, and even longer. Contrary to the assertion of some physiologists, it has been maintained that Belladonna acts only on the eye to which it has been applied. Perhaps this effect on the single eye, which demonstrates, besides, its direct action, takes place only when a small quantity has been employed, and sufficient has not been absorbed to effect both eyes at the same time.

In a larger dose it produces constant dilatation of the pupils, nausea, vertigos, and even delirium, which sometimes lasts from twelve to twenty-four hours, without any alarming symptoms. This latter has sometimes been observed when, given with a therapeutic intent, the medicinal dose has been too high at the outset, or when it has been too quickly excluded, and, in certain cases, from the simple effect of the individual susceptibility. Lastly, we should not pass by its effect upon the bladder, which, in some cases, is partially paralyzed.

The effects that Belladonna produces, when taken in poisonous doses, vary not only with individuals, but according to circumstances—such as the quantity introduced into the animal economy, the way in which it is introduced, the remedies employed in combating. After many observed cases, however, the symptoms

which are manifested are the following:—Nausea, which is not always followed by vomiting; dryness of the mouth; constriction of the fauces; derangement of the head; headache, vertigos, extreme dilatation and immobility of the pupils, commonly confusion of vision, and sometimes complete blindness, to the extent that the eye is insensible to the most glaring light; tumefaction and redness of the face; globe of the eye injected and prominent; a fixed, dull, or haggard gaze, sometimes spirited and furious; hallucinations—at first, a light delirium, then more intense, ordinarily gay or marked by extravagances; numerous and ridiculous gesticulations; immoderate laughing and an inexhaustible loquacity; in some cases speechlessness, or a painful articulation of confused sounds. There is a case reported where a true state of somnambulism was produced: the patient was insensible for twenty-four hours to all external objects,* yet occupied himself in going through all the motions incident to his trade as a tailor; and later, he had hallucinations, speaking as if he was keeping up a conversation with an interlocutor.

Very rarely partial or general convulsions succeed. Merricks has given the case of a child, where there was a convulsive state of the jaw, of the muscles of the face and extremities, and afterwards rigidity of the spine. With the tailor referred to above, the state of somnambulism was preceded by a tetanic rigidity for some moments. More generally, however, there is weakness, syncope, prostration, sometimes alternating with agitation or spasms, sometimes only delirium.

The other phenomena observed in poisoning by Belladonna are less important, and do not exist in the same degree—as dryness and heat of the fauces, which most always are observed, and which sometimes seem to extend to the stomach; difficulty, and well-nigh impossibility of swallowing; thirst, profuse sweats, and heat of the skin.

Notwithstanding the severity of the symptoms, poisoning by Belladonna is seldom fatal. The symptoms, after lasting one, two or three days, disappear, succeeded or not (as the case may be) by a light febrile condition, the patients often not remembering what has passed.

In some cases the blindness lasts after the cessation of all trouble of the cerebral functions, but in general the dilatation of the

pupils does not dissipate for a long time after the other symptoms have vanished, which, indeed, the nervous symptoms, such as vertigos, tremblings, and trouble in the vision, and may last during three or four weeks.

The treatment of poisoning by *Belladonna* differs in no respect from that made use of in poisoning by other stupefying substances. They are emetic and purgative injections where there is a chance to evacuate part of the poison. Administration of subacids, strong coffee, and frictions to the lower extremities to overcome the stupor; cold or tepid baths against the agitation or delirium, general or local bleeding when congestion in the head is threatened. In general, the symptoms are diminished when the constipation is overcome; this is the reason for insisting on the laxative and saline injections.

Colchicum Autumnale.

By JOSEPH BATES, M. D.

FEW, indeed, are the medicinal agents that are of more importance to the physician in the daily practice of his profession than *Colchicum*.

The history of our most valuable medicines is replete with glaring absurdities and contradictions. They have been regarded at certain periods as incomparable blessings to the human family. At no distant epoch you will find all confidence lost in their employment, and regarded not only as worthless and uncertain, but even as prejudicial in the very diseases for which they had the reputation of specifics. Among the numerous medical agents that at times have been lauded to the skies, and again trodden under foot as worse than useless; that have gained an imperishable notoriety in successfully combating with disease amid conflicting testimony of friends and foes, *Colchicum* occupies a conspicuous position. I have used it more or less freely, during twenty years, in the treatment of diseases, such as rheumatism, acute as well as chronic; gout, neuralgia, chorea, morbid conditions of the kidneys, torpid liver, constipation of the bowels,

dropsy, and in some cutaneous affections, &c., and generally with the happiest results—never, to my knowledge, being in a single instance prejudicial to my patients. *Colchicum* is a valuable deobstruent, and for certain conditions of the system the most active diuretic. Perhaps physicians as often fail in the management of their medicines as in the selection of their agents. Some administer quite too small doses, and witness but little or no result, and abandon the use of the medicine; others give too large, and become alarmed and give up its use, and proclaim the article as dangerous. In rheumatic patients of plethoric habits I begin with ten drops of tincture of *Colchicum*, repeated every four hours, until I get foaming or frothy dejections from the bowels; increasing or diminishing the dose according to the susceptibility of the patient. For constipation, I give eight drops every four hours, and continue its use a few days, adding or diminishing the dose as circumstances may indicate. Dr. Robert Dick says:—"Colchicum acts decidedly on the liver, removing torpid states of that organ, and causing yellow or even dark stools to succeed gray or white ones." In France, he says, "it is ranked among diuretics." He regards its use as highly beneficial in gout, rheumatism, neuralgia, and in certain diseases of the kidneys.

Dr. J. M. MacLagan, of Edinburgh, prescribes *Colchicum* in dropsy succeeding scarlatina. He says:—"At all events, when ascites or anasarca are present in Bright's disease as inter-current affections, the use of *Colchicum*, both as a cathartic and diuretic, seems to me to be indicated. In those cases where coma supervenes from accumulation of urea in the blood, he remarks:—"Colchicum will prove of eminent service." He says the power which has been shown that *Colchicum* possesses of replacing the urea in natural, and often superabundant amount in the urine, seems to point it out as a useful remedy in dropsy succeeding scarlatina. He instances its use where the urine was totally suppressed, and symptoms of coma present, with complete success. He uses it successfully in acute rheumatism. He remarks that large doses are not requisite—twenty minims of the tincture or the wine may be given every six hours until some relief is obtained; or a grain of the inspissated juice or of the acetic extract every four hours. Under this treatment, he remarks:—"The

disease sometimes vanishes within three or four days, the medicine producing sickness and purging, and the rheumatism or rheumatic gout rapidly declining. Occasionally the same favorable events take place, although there has been no disturbance of the stomach or bowels. Dr. Maclagan speaks of its utility in urticaria. He quotes cases where the uric acid contained in the urine of patients taking Colchicum was nearly doubled in the space of twelve days.

Dr. Elliotson gives the case of a man laboring under prurigo, in its most inveterate form, to whom half-dram doses of wine of Colchicum were administered thrice daily. This the patient took for three weeks, at the end of which time he was completely cured. He adds:—"Colchicum would thus seem to answer well in some cases of skin diseases, where the urine is of low specific gravity."

Dr. Bennett, of Edinburgh, cites interesting cases of delirium and coma concomitant upon scarlatina treated with Colchicum. He closes his communication with this remark: "Colchicum seems to me worthy of more extensive trial," &c.

Dr. Joseph Bell, physician to the Glasgow Royal Infirmary, in the treatment of rheumatism, says:—"When the urinary secretions are scanty I prescribe Colchicum."

George Fife, M. D., remarks:—"Colchicum, of all the means internally applied for the cure of neuralgia, deserves the most confidence." He adds:—"The advantages of this medicine in neuralgia seem, if possible, to be greater than those which it possesses in gout and rheumatism." He continues:—"I can safely affirm that, so far as my experience of Colchicum extends, I regard all other means as secondary or auxiliary to it in the treatment of neuralgia, gout, or rheumatism." "In my practice," says he, "which now extends over a considerable period, and during which many cases of gout have been treated, I can call to mind no case in which the Colchicum has been injurious, or followed by unpleasant effects; which may also be said of its exhibition in rheumatism." Dr. Chapman says "that from ten drops of the radical tincture of Colchicum, repeated several times in the twenty-four hours, and persisted in for some time, as much may be anticipated, with a view merely to the restoration of the lost suscep-

tibility of the bowels, as from anything else within my experience; rarely, indeed, having seen it fail."

There are very few articles in the list of medicinal agents capable of meeting a greater variety of symptoms, or of fulfilling a greater number of indications, than Colchicum. There are few medicinal agents capable of accomplishing so great an amount of good, if properly managed, and few that do more mischief when imprudently administered. A person should be well acquainted with the variety of its operations in order to administer it with success. I use it very freely in a variety of diseases, and have never witnessed the least unfavorable result. Were its effects upon disease better and more generally known, we should have less conflicting statements from writers upon this article. In the next number I purpose to pursue this article, and allude to a greater variety of diseases in which it might be given, &c.

In relating my own experience with Colchicum, I could do no better than to quote the experience of eminent physicians, with whom I most cheerfully accord.

Aconitum Napellus.

(ACONITE.)

By PHILANDER STEWART, M. D., of Peekskill, N. Y.

THIS plant grows in the mountainous forests and in the plains of France, Germany and Switzerland. It has an erect, round stem, which grows to the height of from two to four feet, and bears on its summit a large and very beautiful raceme of flowers of a dark violet-blue color. In its cultivated state, however, the color and size of its flowers are said to vary very much. It is much prized in England and this country as an ornament to the garden, and is cultivated for that purpose. It flowers in May or June.

Medical Properties.—It is mentioned by Ovid and Pliny as having been extensively used by the ancients as a poison to destroy criminals. It was also used to destroy wolves, and hence one of its names—*wolf's bane*. The whole plant is said to be medicinal, but the root is the strongest. According to Dr. Fleming, who,

says Dr. Christison, has made the ablest investigation into its effects that has yet been undertaken, the following practical inferences may be drawn from its effects on the cerebro-spinal and muscular systems:—

1st. It is sedative, anodyne and anti-spasmodic.

2d. It is an admirable antiphlogistic in apoplexy, phrenitis, or in any disease in which the circulation of the brain is excited.

3d. It is contra-indicated in headache arising from anæmia, and wherever there is a torpor or paralytic condition of the muscular system.

From its action on the circulation, he infers—

1st. That it is a powerful antiphlogistic.

2d. It is calculated to be of great value in all cases where there is inordinate activity in the circulation.

3d. It is contra-indicated where there is an obvious mechanical impediment to the passage of the blood.

4th. It is contra-indicated where there is irritability of circulation with great diminution of power.

Its effects on the respiratory system led him to infer—

1st. That it would be highly useful in pneumonia, pleuritis, &c.

2d. In spasmodic asthma.

It is contra-indicated in difficult breathing arising from any other cause than inflammation and spasm. In the advanced stage of bronchitis, with excess of secretion, it would be injurious by diminishing the power of expectoration.

In acute rheumatism it is a valuable remedy given in conjunction with vin. colch. sem., in the dose of five minims of the former to a half dram of the latter. It is almost my main reliance in that disease. In the inflammatory stage of croup, with tart. ant. et potass. or ipecacuanha, it is highly useful. In hæmoptysis attended with excessive force in the circulation it is one of our best remedies. I am acquainted with a highly intelligent gentleman of the legal profession who is subject to hemorrhage from the lungs, and who assures me he can now prevent an attack at any time by taking four drops of the officinal tincture. He is so susceptible to its influence that that dose will reduce his pulse in one hour from 120 down to seventy per minute.

In over-doses it occasions violent nausea, vomiting, hypercætharsis, vertigo, cold sweats, mania, convulsions and death.

St. Ignatius Bean.

(STRYCHNOS IGNATIA—IGNATIA AMARA.)

THE highest order of scientific classification is, that founded on a complete knowledge of the objects to be classified, taking into account properties and relations equally, at least, with the more evident circumstances of form and development. The object of classifying is to aid investigation and afford the best possible means for grasping the whole of a subject; in short, to construct a "royal road to learning." A complete classification of the vegetable kingdom would include, in addition to what it now does, an arrangement according to the medical properties of the individual plants, else we must conclude that their chemical construction is wholly independent of the agencies that are at work in their growth and development, as well as independent of the materials out of which they are composed, which is a statement of an impossible proposition, inasmuch as chemical analysis but separates the materials one from the other, while the therapeutic qualities of a plant are wholly due to the active properties of some one or more of these materials, free or in combination. This law of correct classification has been thus stated:—"Vegetables owe their medicinal qualities to the immediate materials which compose them. Vegetables of the same family contain, generally, the same materials or immediate principles. The characteristic medicinal property is mainly owing to one of the body. The intensity of this property is proportional to the quantity of the principle which determines it, and if this principle is wanting in a species the characteristic medicinal property of the family fails with it."

Finely illustrative of this general principle is the genus *strychnos*. In four of the species—the *tieute*, *nux vomica*, *ignatia* and *colubrina*—there exists the same active principles which, as experiment has determined it, acts similarly on the vegetable and animal tissues. The *tieute* is the true upas tree of Java, and that with which the Indians poison their arrows. It contains the largest amount of the peculiar active principle of any in the genus. The *nux vomica* has been received largely into medical practice, and has been subjected to careful and extensive experi-

ment and chemical analysis, while the ignatia and colubrina are as yet comparatively little known, save as powerful agents abounding in strychnia.

The ignatia, named by the Jesuits in honor of the founder of their order, is a native of Cochin China, the Philippine Islands, and other parts of Asia, and has been for a long time employed in these sections in numerous diseases. It is the opinion of Pareira that the nux vomica of Serapion was the St. Ignatius bean; however, the seeds came into the Dutch shops, according to Alston, about the latter end of the seventeenth century, and there is reason to suspect they were known long before this.

To MM. Pelletier and Caventou is due the first careful analysis of the ignatia, which is published, at considerable length, in the tenth volume of the *Annales de Chimie et Physique*. Say they:—"We have obtained from the ignatia strychnine under a crystalline form, perfectly white, and with all the characteristics of a pure substance, endowed with the distinctive and characteristic properties of salifiable bases—that is, with the faculty of uniting with acids, of saturating them, and of forming with them true neutral salts, soluble, transparent and crystallizable. Encouraged by this success, we undertook the analysis of the nux vomica, and immediately recognized in this material the precise alkaline principle of the St. Ignatius bean. In the nux vomica it constitutes, by its combination with an acid and mixture with a coloring matter, the yellow, bitter principle that has been described. The alkaline principle also exists in a wood known under the name of the *bois de couleuvre*, which naturalists call *strychnos colubrina*." According to this authority the analysis of the ignatia gives the following:—1st, the igasurate of strychnine; 2d, a little wax; 3d, a concrete oil; 4th, a yellow coloring matter; 5th, gum; 6th, starch; 7th, bassorin; 8th, vegetable fibre. The nux vomica, analyzed by the same process, furnished the same results, though in different proportions. It contains less of the salt of strychnine, but a greater quantity of concrete oil and coloring matter, while the colubrina is charged with fatty matter, contains less of the salt of strychnine, a greater quantity of coloring matter, and the igneous fibre replaces entirely the bassorin and starch. Later analysis have not differed from this, except they incline toward denying the presence of any starch in the ignatia.

As has been said, the action that the *nux vomica* exercises on the animal economy has been studied with great care, and it has, by farther experiment, been shown that the different substances given by the analysis of the various species of *strychnos*, after having been carried to the highest degree of purity, and been administered in various doses to many animals, afford the same general results as when obtained from the *nux vomica*. "The other principles contained in the same vegetables, when in a state of purity, have no action on the animal economy." The salts of strychnine have a more energetic action than the base itself, and this on account of their great solubility in a small quantity of acid.

Experiments upon the inferior animals were made with the *ignatia* by Pelletier and Caventou, in great numbers and under a variety of conditions, giving precisely similar symptoms, from the first stage till death ensued, as were shown under the influence of the other species of the *strychnos*, or of the active principle itself. Another extract from this paper will suffice on this head:—"No substance exists capable of forming with strychnine combinations not poisonous; and, consequently, the only means of remedying the effects of strychnine, and the substances which contain it, are those which, acting directly upon the animals, and independently of their chemical action on the poison, tend either to their expulsion as emetics or to weaken the spasmodic movements, the cause of the asphyxia to which the animals yield, or to prevent the asphyxia by surgical treatment and the mechanical means indicated by the physiologists that have been cited." The conclusion is "that that the strychnine, an alkaline and salifiable base, is the active and poisonous principle of *strychnos*, particularly of the *ignatia* and *nux vomica*; that in all its combinations it maintains its properties on the animal economy; that we cannot, perhaps, by therapeutic means remedy the ravages it makes—and it will be in vain to seek for a substance which, as an antidote, will be capable of preventing its effects by neutralizing it."

We shall next inquire, what are the effects of *strychnia* and its combinations upon the nerves?

The degree of effect varies with the quantity employed, but it seems to be the same in kind, being confined to the ganglionic system of nerves and the spinal cord, extending as high up as the

medulla oblongata, and, according to Flourens, influencing the cerebellum, but not directly affecting the cerebrum. Hence in fatal cases the intellect is not disturbed till the extinction of life. The decapitation of animals does not hinder the characteristic effects of this agent, while, on the other hand, the removal of the spinal marrow completely prevents its peculiar agency, even though artificial respiration be maintained. "From some experiments of Segalas, it appears also to exhaust the irritability of the heart; for in animals he found that organ could not be stimulated to contract after death, and life could not be prolonged by artificial breathing. These differ from all narcotic poisons by not destroying the sensibility. During the intervals of the fits the sensibility is, on the contrary, heightened and the faculties acute. (Christian.) M. Magendie having, by a series of experiments, ascertained that the whole family of plants of the *strychni amari* had the singular property of acting immediately on the spinal marrow without affecting, except indirectly, the functions of the brain, thought they might be advantageously applied to the treatment of disease. He soon put his newly-discovered remedies to the test, and his conjecture, he says, "was verified by numerous experiments made at the bed side." In his "numerous experiments" he discovered some remarkable physiological facts. His attention, in the use of this agent, was mainly directed to paralytic subjects, and he found that it excited convulsions in the paralyzed part before any action was discoverable in the sound parts. In hemiplegia, the sound side would be perfectly quiet, while the paralytic parts would be affected with tetanic shocks and profuse perspiration: while any contact of an external body with a part under the influence of strychnia, which is supplied with nerves originating from the spinal cord, immediately excited convulsive action. Of these two phenomena, Dr. Grainger gives an explanation as follows:—"Strychnia acts by preference on the paralytic limb or limbs, because the cerebral control is removed from the paralyzed limb. If the cord be divided, the pure spinal power remaining, when the skin is touched the limb is retracted, and must be retracted, because the cerebral control is wanting. So when the spinal chord is stimulated by strychnia, it must act on the limb or limbs from which the cerebral power is withdrawn."

These appear to be the results of the investigation on the constitutional effects of the strychnine combinations; we now inquire what classes of diseases come into the range of these agents?

The omni therapeutic properties attributed to the *ignatia*, in a pamphlet from the pen of a once afflicted but now restored clergyman, gave, very naturally, the impression of a quack advertisement, though the paper called the attention of scientific practitioners, somewhat extensively, to the real virtues of the *ignatia*. This reverend gentleman presented a most formidable array of diseases which his pills had cured, embracing well nigh the whole nosology of modern times, but the farrago was pardonable from the extremely modest and non-committal form in which it was offered, and as being not the results of his own personal experience, but given on the strength of communications from those "in every class of society" who professed to have been cured by the use of his preparations. While it is unreasonable, with any knowledge of the scope and mode of action of the *ignatia*, to accept a vast deal of what he gives, as capable of being reduced by this agent, yet we can readily see why it is applicable to a wide range of the symptoms enumerated.

That condition of the body indicated by a great number and variety of symptoms called dyspeptic, is clearly dependent upon weakened and imperfect action in the digestive organs. The organ of the digestive apparatus, in consequence of its direct exposure to so many irritating substances, and its intimate sympathetic communications, is affected with many forms of sub-acute and chronic gastric irritation and inflammation, giving rise to general weakness, uneasiness of body, and a host of distressing sensations, while, at the same time, the moral and intellectual faculties are, in their turn, liable to be affected by these disordered functions. The stomach and duodenum are the most eminent of the digestive organs, and these are connected together, as well as combined with all their congeries appropriated to the perfect elaboration of the nutritive and sustaining principles of the economy, by the ganglionic system of nerves. The stomach is the centre of the digestive apparatus, and owes this character to its intimate union with the great solar plexus—the centre or brain, if it may be so termed, of the ganglionic system, regulating the nutritive functions. It is very clear, therefore, that excesses of

any kind, or modes of life, that do not give these organs their appropriate play, or weaken it by over action, and so, in either case, destroying the equilibrium of the functions, must tend, to a greater or less degree, to deaden the action of this entire system of nerves, and the philosophic adaptation of the remedy to the disease is evident in the numerous symptoms, evincing a derangement of the digestive apparatus in the case of persons in the pamphlet referred to, as having been overcome, and the system restored to a healthy tone by the use of the *ignatia*. It is with some satisfaction that we refer to this catalogue of maladies, in that it is made up of the results of individual experience; and making all allowance for the probable deception in attributing more effects to the cause than it can conveniently produce, we can, after all, trace a true connection between the properties of the *ignatia* and the status of the constitution it rearranges.

The specific use of the *ignatia* may be stated thus:—It has a tonic, stimulating effect on all the organs under the influence of the ganglionic system of nerves, by its acting directly upon them, exciting and equalizing their weakened and disturbed action, and consequently restoring to their equilibrium the digestive functions.

The *ignatia* appears to be used quite indiscriminately in the countries where it is native, though how far, beyond what has been stated, it is useful as a remedial agent, remains to be shown from the experiments of our hospital and other practitioners. The large amount of strychnia in the *ignatia* calls for great care in administering it, and also for especial attention on the part of the profession towards discovering some available antidote for the poison when taken in the pure alkali or in its combinations. Though among the most painful in its operations of all the poisons, it is swallowed as a luxury by those who are determined to die before their time; and when taken in any considerable dose, it is about impossible to hope for relief to the sufferer from any agent used as counteracting. Olive oil, lard and morphine have been used, as also chlorine, bromine and iodine, in the endeavor to form an insoluble salt with the strychnia; but the absolute necessity of immediate action has given these antidotes only indifferent success. The large and constantly increasing demands for the *ignatia*, and its consequent use, will undoubtedly soon develope

its important properties, and give it a prominent place in our *materia medica*. So far as it appears, this is a specific agent; and every discovery of such agents, with their applications and limitations, and bringing them universally into practice, is, to that extent, perfecting the science of medicine.

Opiated Colchicum Wine in Rheumatism.

By Dr. EISENMANN.

Dr. Eisenmann, of Würzburg, first states the wide application which he gives to the word "rheumatism," denoting by it every affection which may arise in the healthy system, independently of any specific cause, from exposure to cold. "By exposure to cold, I do not understand merely the effect produced by the contact of cold water or cold and humid air with the external integument, but also that which takes place when cold and damp air penetrates into the lungs, or when cold water is taken into the stomach, the temperature of the body having been raised by exercise." This view is justified by the facts—1, that cold gives rise to the most various affections of the nervous and vascular systems; 2, that these various affections may become, by metastasis, transformed into each other; 3, that they communicate to the economy a marked predisposition to affections of the same nature, such predisposition being increased with each reproduction; 4, and that they yield to the same treatment, whether they show themselves under the form of *neuroses* or of vascular affections. Under the title of *rheumatic inflammation*, therefore, the author ranges all inflammatory affections of the heart, lungs, pleura, peritoneum, kidneys, serous membrane of the liver, &c., when these are not due to any specific cause, and treats them in the same manner as acute articular rheumatism.

The means which, beyond all others, he has found of efficacy in the treatment of rheumatism, is a mixture of colchicum and opium, the colchicum acting far more efficaciously when so combined, and then not giving rise to the half-poisonous effects which often attend its use when given alone. Neither the one nor the other substance will produce alone the advantageous effects which result from their union. Dr. Eisenmann speaks not only from his own large experience, but from that of many of his medical friends, among whom "Eisenmann's drops" have acquired a great reputation. These consist of twelve parts of colchicum wine and two of tincture of opium, twenty drops being taken three times a day. Instead of preparing the colchicum wine with sherry, as he formerly did, he now makes it according to the formula of the Prussian Pharmacopœia, which directs 150 parts of the colchicum seeds to be macerated in 770 of alcohol; this preparation being always uniform in strength and more active than the ordinary colchicum

wine. Although the above drops succeeds so well in acute rheumatic affections, they are of little or no use in old and chronic cases. This induced the author to try the effect of adding minute doses of corrosive sublimate; and although his trials of this modification have been, as yet, too few to admit of an opinion being pronounced in respect to chronic cases, he has found the addition of great advantage in many cases of the acute form. Although in the various forms of rheumatism in which he has employed this treatment he has not had to have recourse to preliminary bleeding, he by no means denies that this may not be occasionally desirable in the robust.

In treating acute articular rheumatism in this way, its course has usually been cut short in from the third to the fifth day, convalescence rapidly following, and no trace of heart affection persisting. When the pains have been very severe, tepid applications of a very weak solution of corrosive sublimate have been made to the joints, with the most satisfactory results. Sometimes after a rapid amelioration by means of the colchicum, when the pulse still continues irritable, and the tongue remains loaded, an emetic or purgative expedites convalescence. Among the rheumatic affections of the *mucous membranes*, which may be rapidly and durably cured by means of the opiated colchicum, without the sublimate, may be specified angina, pulmonary catarrh, and influenza, gastric fever, catarrhal diarrhoea, and catarrho-rheumatic conjunctivitis. In the case of catarrhal ophthalmia, even of a severe character, its remarkable efficacy may be watched step by step. Among affections of the serous membranes, pleurisy and perihepatitis stand prominently forward as amenable to this treatment. Of parenchymatous inflammations, pneumonia has been the only one in which the medicine has been tried, and that only in two slight cases, which recovered with rapidity. In muscular rheumatism of the head, loins, &c., from two to four doses have always sufficed. It is also of great efficacy in cases of rheumatic neuralgia, especially in facial or intercostal, in sciatica and odontalgia. But the case must be recent, or it will be of no avail. In odontalgia the results are truly remarkable, a single dose rapidly dissipating the pain. The distinction between the rheumatic form of odontalgia and that which arises from carious teeth is exhibited by the different effects of the colchicum. For the relief of odontalgia arising from carious teeth, the author, after having cleaned out the cavity of the tooth, introduces into it a morsel of nitrate of silver as large as a pin's head. In about a minute the moisture of the mouth dissolves this, and the mouth is then to be gargled with cold water, and the pain disappears. He has employed this plan of relieving the pain of carious teeth for the last twenty years, and he has seldom known it fail, even after the ineffectual trial of various other measures. It causes no pain, and it retards the progress of the caries.—*Bulletin de Thérapéutique, and Druggists' Circular.*

PEPSIN IN THE VOMITING OF PREGNANCY.—M. L. Corvisart, the *Lancet* says, has of late advocated the use of pepsin to allay extreme vomiting in pregnancy.

Veratrum Viride in Nervous Affections.

By JOHN STAINBACK WILSON, M. D., of Columbus, Georgia.

I have read with great interest the article in the 'September number of the *Southern Medical and Surgical Journal* on "*veratrum viride*," in chorea and other convulsive diseases. Dr. Baker's views as to the *modus operandi* of this remedy are doubtless correct; and it is strange that the truth so ably enforced by him should have been overlooked by the mass of the profession, and even by those who have most extensively used and warmly advocated the great sedative. It would seem that a knowledge of the controlling power of *veratrum viride* over the circulation would almost inevitably lead to its use in convulsive affections originating in exaltation of nervous sensibility; yet, as already intimated, this practice appears to be almost unknown to the profession. Still Dr. Baker's declaration is not strictly correct, that "all that has been published, either in the "United States Dispensatory" or elsewhere, concerning the remedial power of this agent, was written in reference to its value in the treatment of febrile and inflammatory diseases." In an article published in this journal, in July, 1853, under the head of "a brief summary of my experience with the *veratrum viride*," may be found, among a number of others, a case of epileptiform convulsions which was successfully treated principally with *veratrum viride*. The following is an extract from the above article:—"The subject of the convulsions was an anæmic boy of ten or twelve years of age; the spasms were frequent and extremely severe, every paroxysm apparently putting the life of the patient in imminent danger; the *veratrum*, to reduce the frequency of the pulse, and ether inhalations to quiet the spasms, were the remedies almost exclusively relied upon; and these indications were fulfilled in the happiest possible manner, snatching the little sufferer from the very jaws of death." This quotation, while it may render some qualification of Dr. Baker's remark necessary, shows very plainly that the writer did not, at that time, fully apprehend the controlling power of the *veratrum* over the nervous system; and as this important truth has taken a more definite form in his mind since that time, his object in writing now is not so much to criticise and find fault as to return thanks to Dr. Baker for the practical demonstrations so forcibly presented in his article. I believe that the discovery of the sedative powers of *veratrum viride* in febrile and inflammatory diseases is among the greatest, if not the greatest, boon of modern therapeutics; and if it should be found to possess equal power over nervous affections, its virtues cannot well be over-estimated. My experience with it in the latter class of disorders is quite limited, but in the former not inconsiderable; and I can truly repeat the declaration made in the above quoted article, published by me in 1853, and based upon the result of twenty-five cases of various disorders:—"I have never seen it fail in reducing the frequency of the pulse, while there was generally an improvement in its volume."

My experience fully corroborates Dr. Baker as to the size of the dose. When there is no urgent necessity for a prompt effect, I generally begin with only three or four drops for an adult, every three hours, increasing one drop each dose until the pulse is sufficiently reduced. By pursuing this plan I have almost always succeeded in accomplishing the desired effect, and without a single unpleasant symptom—without even the slightest nausea: indeed, in many cases patients could not tell from their feelings that they were taking anything more than so much water; and yet the pulse may thus be pleasantly and gently reduced from one hundred and forty to sixty, or even lower. When nausea and vomiting do occur they are very distressing and peculiar; but I have never had any difficulty in giving relief by diminishing the dose or by giving a little brandy, or ether, or morphine, or something of that kind. I trust that Dr. Baker will continue to push his investigations in the line marked out by him, and that others will follow his example, until the controlling power of *veratrum viride* is as fully demonstrated in nervous as it is in vascular disorders.—*Southern Med. and Surg. Jour.*

Injection of the Per-Sulphate of Iron for the Cure of Varicose Veins.

James Hickey, Ireland, æt. 46, laborer, admitted Nov. 10th, 1859. States that he has had varicose veins for twelve years, and varicose ulcers for nine, and has always enjoyed good health. Knows no cause of their appearance excepting his work, which obliged him to be constantly on his feet; has been a hard drinker. Into the internal saphenous vein of this patient, five inches below the internal condyle of the femur, five minims were injected; no unpleasant symptoms followed. The varicose veins are obliterated, and the ulcers healed.

Case 2.—Edwin Hughes, Ireland, æt. 37, laborer, admitted Dec. 22d, 1859. States that he has had varicose veins for fifteen years, and ulcers for ten. Had been under treatment different times for the ulcers, which had healed and then returned when he resumed work; has always been healthy otherwise. Into the external saphenous vein ten minims were injected, and into internal five. On the second day after the operation this patient was taken with a chill, followed by a fever—no sweating. He complained of severe pain in the head; the eyes were sensitive to the light; the tongue coated with a white fur in the centre, and fiery red on the edges, also pointed; the pulse quick, 100 per minute, and bowels constipated; the skin hot. On examining the leg it was found inflamed in the course of the veins injected. This patient was ordered to take sulph. magnesia, $\frac{3}{4}$ i., and at bed-time, pulv. doveri, gr. x., and cold applications to the leg inflamed. The above symptoms soon subsided, and suppuration only occurred in the external saphenous, into which ten minims had been injected. This patient left the hospital on April 2d. The veins were entirely obliterated, and the ulcers healed.

Case 3.—James Murphy, Ireland, æt. 30, laborer, admitted Feb. 11th, 1860. Stated that two years ago he had erysipelas of the leg now diseased; also had an abscess near the knee-joint. After he had recovered from the erysipelas, he noticed for the first time that the veins were enlarged and tortuous, and that an ulcer appeared a few weeks after, for the treatment of which he now comes to the hospital. Into the internal saphenous five minims were injected. This patient left the hospital April 8th, entirely cured.

The above cases were operated on by Dr. Isaacs, the visiting surgeon, Feb. 18th. The injection he used was composed of the

R.—Per-sulphate of iron, $\frac{3}{4}$ i.
Water, $\frac{3}{4}$ iii.

And the same used in the following cases:—

Case 4.—Ernest Muller, Germany, æt. 34, blacksmith, admitted March 28th. States that twelve years ago he noticed the veins of his right leg were becoming enlarged and knotty, and that seven years ago an ulcer appeared, which had healed at various times under treatment, and then returned when he resumed his labor. Into the internal saphenous was injected by Dr. Turner, the resident physician, four inches below the internal condyle of the femur, ten minims. This patient left the hospital April 11th. The vein injected was obliterated, and the ulcer (two inches by three) healed. No unpleasant symptoms followed the operation.

Case 5.—John Kelly, Ireland, æt. 26, moulder, admitted March 28th. States that he has had varicose veins for eighteen months; was obliged to leave his work. Had an ulcer (now three inches long by one in width) for four months. Into the internal saphenous, four inches below the internal condyle of the femur, I injected twenty minims, and into a branch of the same, five. The veins are now obliterated, and the ulcer healed.

Case 6.—Sarah Garland, Ireland, æt. 46, servant, admitted March 28th. States that her right leg began to swell four weeks before her first confinement, twenty-two years ago; has continued swollen ever since; that an ulcer appeared six years ago, for which she had been treated at various times at Bellevue Hospital; has always been healthy otherwise. Into the internal saphenous, four inches below the internal condyle of the femur, five minims were injected. The vein is now obliterated, and ulcer healed.

In the last two cases (5, and 6), that portion of the veins injected has entirely sloughed out. The injection seemed to be too concentrated, destroying the veins and tissue immediately surrounding. No constitutional symptoms have occurred. The sloughs have now been thrown off, and the ulcers resulting are nearly healed. Dr. Turner and myself have since operated upon four other cases, in which nothing of the kind has resulted. The injection used was composed as follows:—

R.—Per-sulphate of iron, $\frac{3}{4}$ iss.
Water, $\frac{3}{4}$ vii.

[*Medical Press*, April 28th, and *Cincinnati Med. and Surg. News*.

Valerianate of Strychnia.

By R. WYSONG, M. D., of Charlotte, N. C.

The above compound, so far as my knowledge goes, has never been introduced into the Pharmacopœias, either of this country or of Europe. I feel, therefore, some delicacy in bringing it before the profession; but believing, as I do, that it will prove an acquisition to an already long list of medical preparations, and trusting to the liberality of the members of the profession for a fair trial of this new preparation before they condemn it, I will give my limited experience with it.

I have been using the valerianate of strychnia some ten months, and find that it is more particularly adapted to those cases where there is general debility, accompanied with nervous excitability, loss of appetite, indigestion, constipation, depression of spirits, and all the symptoms following more or less on the want of tone in the nervous system. Heretofore, in many of such cases, I have used strychnia, and although they generally improved under this treatment, yet I never met with as complete success with it as I have in similar cases with the valerianate of strychnia; hence I am led to believe that, in all such cases as above mentioned, we have in this preparation a very reliable and useful remedy.

The preparation I have been using is prepared by dissolving sulphate of strychnia in valerianic acid. So simple a preparation can be put up by any physician or druggist. I have been using it in the following proportions:—

Sulphate of strychnia, gr. viij.
Valerianic acid, ʒ i.

But this quantity may be altered to suit particular cases.

The following are some of the cases in which, among others, I have used it with entire satisfaction:—

May, 1859.—Mr. E., aged 45; has suffered with asthma for fourteen years; has tried various remedies without the least benefit. The paroxysms came on about once a week, he never passing two consecutive weeks without having one; is very nervous, and suffers from general debility.

Jan. 19th, '59.—Prescribed

R.—Sulphate of strychnia, gr. i.
Pure water, ʒ i.
Acetic acid, q. s.

Directed ten drops three times per day, to be increased one drop per day until the dose reached thirty drops. Kept him on this prescription one month without any apparent benefit.

Feb. 20th.—Prescribed

R.—Valerianate of strychnia, ʒ i.
Water, ʒ i.

Directed ten drops three times per day, to be increased as above. Has never had but one paroxysm since he commenced with this prescription, and is now,

to all appearances, in good health. The medicine was kept up about one month.

Sept. 20th.—Has continued free from asthma; occasionally, during damp or rainy weather, experiences slight hearseness, with disposition to clear the throat. This is generally relieved by a few doses of the sol. valerianate of strychnia.

May, 1859.—Mr. R., aged 60; has had asthma since July, 1858, the paroxysms increasing in frequency each week. He now has one nearly every day, and sometimes two per day. In conjunction with asthma, he has bronchitis, also indigestion, torpor of the liver, as indicated by decided yellow hue of the skin, constipation, and ashy stools, he never having an evacuation without taking some purgative; at times there is decided stranguary; this seems to be superinduced by constipation, as it is always relieved by free action of the bowels. Pulse over 100, small, and at times can scarce be counted; great general debility—spends more than half the day in bed; very nervous, so much so that by reading the least exciting newspaper article, or even conversing with a friend, will at times bring on a paroxysm. Cannot sleep in the recumbent posture, but is compelled to be propped up nearly straight in bed. The paroxysms come on generally about 8 P. M., but may be brought on any hour by the least excitement. Has been in the habit of taking nauseants when he feels an attack coming on, which, after several hours, relieves him for the time.

May 13th.—Prescribed

R.—Valerianate of strychnia, 3 i.
Water, 3 i.

Directed to commence with five drops three times per day, to be increased three drops per day until the dose reached thirty drops. For several weeks had no sensible effect, owing to the dose being too small, and very irregularly taken; in fact, he seemed to be growing worse.

May 31st.—Prescribed

R.—Acetate of squills, 3 i.
Tar. ant., gr. ij.

Directed to begin one hour before the usual time for attack; teaspoonful every fifteen minutes, until nausea was produced. At the same time prescribed

R.—Valerianate of strychnia, 3 ij.
Water, 3 i.

Directed fifteen drops three times per day, to be increased one drop per day as above. After the fourth day, as there had been no paroxysm, directed the nauseous mixture to be left off.

June 11th.—Has had no return of paroxysm; no sign of bronchitis; bowels regular; skin greatly cleared up; pulse seventy, rather full and strong; general health improved in every respect, so much so that he drives out several miles every clear day, and sleeps without inconvenience in a recumbent posture. Continued the valerian, thirty drops three times per day.

July 1st.—No return of asthma; health very much improved; seems quite free from nervous excitability. Continued the valerianate of strychnia as before.

Sept. 20th.—Continued free from asthma up to the latter part of August; had not been taking the medicine regularly for some weeks. About this time, during a very damp day, drove several miles to see a neighbor; upon reaching there sat down in a draft until completely chilled, which brought on his asthma. Since that time has had one paroxysm. Saw him September 8th. Prescribed valerianate of strychnia as before. He is now enjoying his usual health.

I have given the above case at some length, in order to show more fully what I conceived to be the effect of the medicine. I doubt very much whether the case will ever be permanently cured; but by the use of the above preparation the disease has evidently been kept at bay, and the patient's general health very much improved; and by long-continued use of the remedy, he may possibly break up all tendency to asthma.

I have used valerianate of strychnia with very great success in the treatment of females. One case of inflammation of the ovarian gland followed by suppuration, in leucorrhea; of course, in such cases, I also applied local means.—*Southern Medical and Surgical Journal.*

Selections.

A SPIRITUALIST DOCTOR.—The following incident is from the *New York Times*, upon whose responsibility we copy it:—A short time since the child of one of our up-town families was suddenly seized with a sickness, which seemed so serious, that immediately the family physician, a man of long beard, long bills, and its accompaniments, was sent for in great haste; but, alas! he came not, and the sudden culmination of the disease into a terrific convulsion compelled the family to abandon their regular doctor and send for the nearest one, who proved to be an educated man of the old school—a serious objection, indeed, to the family, but which, in their distressed situation, could not well be helped. The character of the difficulty was quickly perceived, and an emetic speedily removed a quantity of undigested and improper food, restoring the child to comparative health. The thanks of the whole family were prodigally bestowed upon the physician, the preserver of their child, who was requested to continue his attendance till the child was entirely recovered. The next morning brought the tardy Dr. Pellets, who was met with a storm of reproaches for his neglect and inattention, and with the statement that if they had waited for him their child would now have been a corpse, and that now, as the doctor had done so much for them, they could never repay him, and an intimation was held out that they should continue to employ him for the future. Dr. Pellets could not afford to lose so valuable a family without a struggle to retain it; so he said, commiseratingly: “I re-

gret, my dear madam, the alarm you have been under, and the danger in which your beautiful darling has been. At what hour did you say the child began to improve?" "It was just as the clock struck four," was the answer. "Ah, my dear lady, I thought it was so. It was five minutes before four o'clock when I entered my house and saw your call upon my slate. My spirit was put into immediate communication with your child, and through it I was enabled to act upon the convulsed spirit of your charming little cherub!" "Is it possible, my dear Doctor Pellets? We thought it was almost a miracle, and foolishly attributed it to the action of this allopathic's poisonous emetic, which indeed only brought a few raisin skins and stones and a little bit of minee pie it had eaten! Ah! Doctor, forgive us for doubting you, and the hard words and harder thoughts we have had for you." Poor Dr. Squills was incontinently, most uncereemoniously, kicked out, and the spirits are in full favor. Even a doctor with journeymen assistants can't compete with one who has spirits at command with less trouble than Alladin.—*Druggists' Circular*.

TREATMENT OF EPIDEMIC WHOOPING-COUGH BY VACCINATION.—According to the statement of Dr. Otsolig, the above-named treatment, recommended by French physicians, was repeatedly tried in the hospitals *des Keuenoehen Governments*, with the following results:—1st, the vaccination passed through its regular stages during this disease; 2d, it had in some cases an obviously favorable result upon the issue of the cough, cutting short its duration, and modifying the violence of its attacks; 3d, in many cases no perceptible impression was made upon the disease. In some cases the internal use of tannin, (four grains, in broken doses every twenty-four hours,) in connection with an infusion of senna leaves, proved to be of great value, six days' continuance often being sufficient to cure the disease.—*Grucael's Notezen, and Southern Med. and Surg. Journal*.

LACTAGOGUE EFFECTS OF THE LEAVES OF THE CASTOR-OIL PLANT.—At the meeting of the Medical Society of London, on the 12th ult., Dr. Routh exhibited three preparations of the leaves of the castor-oil plant—a tincture and liquor (doses of each one dram), and an extract (dose, five grains.) The leaves were obtained from Australia, and the drugs prepared by Mr. Greenish, of London. The Society would remember that Dr. Routh had read a paper on the subject of the lactagogue effects of this plant, the leaves of which, applied to the breasts as poultices, and as fomentations to the vulva, for three days at intervals, were used in Bonavista, to induce milk in the breasts of women within catamenial ages, but particularly in those women who had borne children. The milk, once produced, could be perpetuated by the simple irritation effected at the nipple by the suction of a child. These facts, related by Dr. M'William, had been confirmed in part by Dr. Tyler Smith. Dr. Routh had published his experience on the subject also, in a series of papers. To lying-in women, with a deficiency of milk, Dr. Routh had given the infusion, in combination with conger-eel soup, and the effect in determining a copious flow

of milk had been remarkable. He had administered the extract to unmarried women within catamenial ages, and the effect had been to produce intense pain in the breasts; but as he could not find anybody in that case who would try the effects on a child, he had not yet induced milk in the breasts of such. After three or four days the symptoms were relieved by a copious leucorrhœa. As it was possible that a larger experience of this remedy might enable us to convert some married women, within catamenial ages, into wet nurses, and as it undoubtedly acted as a powerful lactagogue in suckling women, he was desirous that others also should experiment on the subject, and therefore to direct them where it could be procured.—*London Lancet*.

CASE OF PUERPERAL CONVULSIONS SUCCESSFULLY TREATED BY SUBCUTANEOUS INJECTION OF MORPHIA.—Medication by subcutaneous injection of various remedies, especially the salts of the alkaloids, begins to play quite a prominent rôle. Although we look upon the subject with some doubts of its ultimate success, and fear that, as is usually the case with new modes of treatment, subcutaneous injection will be carried to the extreme, and for this very reason its true merits will not be put in the proper light; yet we cannot omit to record an observation coming from so high an authority as Prof. Scanzoni undoubtedly is. From one of the recent numbers of the *Bulletin de Thérapeutique*, the *Medical Times and Gazette* quotes a case of puerperal convulsions, recorded by Scanzoni, occurring in a robust primi para, twenty-one years of age. When labor commenced, convulsions, with loss of consciousness, supervened. The entire body, and especially the extremities, were œdematous, the urine contained albumen, and presented to the microscope numerous fibrinous cylinders. Venesection, a bath, and cold irrigations to the head, were prescribed. Later, a solution of meconate of morphia was subcutaneously injected three times, and from this time until the termination of labor the convulsions (which, as a rule, it will be remembered, not only become more violent, but also more frequent, with the progress of labor,) abated. There were but two paroxysms in course of nine hours after the injections had been made; while before there had been three fits within less than two hours.—*Med. and Surg. Reporter*.

SUBCUTANEOUS INJECTION OF A SOLUTION OF ATROPINE IN TETANUS.—While this form of medication is now attracting much attention, it becomes our duty to record such clinical facts as bear upon the subject. In one of the recent meetings of the Société de Chirurgie, at Paris, we are informed by the *Gazette Hebdomadaire*, a case of traumatic tetanus was reported, occurring in the practice of a distinguished provincial physician, Dr. Pescheux, in which this treatment proved entirely successful. The patient had received, from the fall of a chimney, among other injuries, a complicated fracture of the leg. All went well until the fifteenth day, when Dr. Pescheux conceived the idea of practicing a subcutaneous injection of sulphate of atropine on the median line of the nape of the neck. It was done; the symptoms of atropine poisoning became very well marked. When these subsided the tetanic symptoms

also had almost completely disappeared; deglutition became easy, the rigidity of the muscles was lessened. In the evening another injection dissipated what remained of the tetanic symptoms.—*Ibid.*

BROMIDE OF POTASSIUM IN GOITRE.—Dr. O'Conner, of the Royal Free Hospital, found (*London Lancet: Chic. Med. Ex.*) ten grains of bromide of potassium with twenty minims of liquor potassæ, gradually increased to twenty-five grains and forty minims, given three times a day in an infusion of quassia, to effect a complete cure in cases of chronic goitre, where iodide of potassium and iron had made scarcely any impression. Strong iodine paint may be used at the same time as an external application.—*Cleveland Med. Gazette.*

QUININE A SPECIFIC FOR SCARLATINA.—Dr. M. B. Sellers, of Oakland, La., states, in a private letter which has been handed to us, that after considerable experience he believes quinine to be a specific in the treatment of scarlet fever. He has treated fifty cases, some of which were malignant, with quinine, without one resulting fatally, and previous to his adopting this treatment he had several deaths in his practice. He administers it in full doses, giving to children seven years old five grains every hour until twenty grains are taken; to adults, ten grains every hour until they take forty grains. He does not say whether this dosing is repeated. The quinine treatment was almost exclusively relied on.—*Med. and Surg. Reporter.*

PREVALENCE OF ASTHMA AT BARDSTOWN, KY.—Dr. W. H. Newman, in a communication to the *Louisville Medical News*, speaks of the remarkable prevalence of asthma in and around Bardstown. In a population of 2,000, he says, there are over one hundred asthmatics—notwithstanding those who suffer at times with slight difficulty of breathing. Fifteen or twenty years ago the disease was scarcely known there, now five per cent of the population suffer with it. Bardstown is on an elevated situation, and the country around undulating, and with this exception is one of the healthiest towns in the country.—*St. Louis Med. and Surg. Journal.*

OPIUM AS AN APHRODISIAC.—Dr. McGowan, lately of Japan, has been lecturing in England on the use of opium, detailing the observations he had made in those countries where its excessive use is indulged in. He holds opium to be an aphrodisiac, the use of which speedily destroys the procreative power, and acts thus as a check on the population; hence he demands interference to suppress the traffic. Dr. Lizars and others brought the same objection against tobacco. We have no wish to defend the excessive use of either of these drugs; but we are inclined to the belief that the picture is overdrawn, and the effect spoken of is only produced on peculiar constitutions, and is very exceptional.—*Nashville Journal.*

A SAD PICTURE OF ALCOHOL AND ITS DOINGS.—Prof. S. H. Dickson, in his late introductory lecture before the students of Jefferson Medical College, says:—"All Christendom should shudder at hearing that while yet the asy-

lum for habitual inebriates, undertaken to be built by the munificent State of New York, is not half finished, applications have been made for reception by not less than *twenty-eight thousand* of these unfortunates; of which number—it is enough to make one's heart bleed to record it—upward of four hundred were *women*! Not women of the parish cast, which society makes, and then tramples in the mire, but women in a condition—either of themselves, or through their friends—to bear the expenses of such accommodations.” No stronger argument than this need be offered for the utility of such an establishment, and we trust that the day is not far distant when asylums for inebriates will be erected in every State in the Union.—*American Med. Gazette*.

MIXTURE FOR DISPELLING INEBRIETY.—Several periodicals have stated that Dr. Beck, of Dantzig, had discovered a mineral paste, the true antidote of alcoholic inebriety. M. Chevallier, who mentions the circumstance in the *Journal de Chimie Medicale*, remarks that the real specific for intoxication is acetate ammonia, exhibited according to the form of Mazuyer:—Ammonia acetatis, 2 to 2½ grains; aq. cum saccharo, 5 ounces. To be taken in one dose.—*Savannah Journal of Medicine*.

NITRIC ACID IN ADYNAMIC REMITTENT FEVER.—Dr. Bedford Brown, of North Carolina, (*Amer. Jour. of Med. Sciences: Amer. Med. Monthly*), considering the tonic properties of nitric acid not due to any influence it may exert on the digestive organs, but to its aiding in the formation of the blood, which it renders more plastic and organizable, tested the power of the acid against “remittent fever of an adynamic type.” It was administered in at least forty simple cases, either in connection with sulphate of quinia and other minor remedies or alone. A large proportion of the cases were of a decidedly malignant type; nevertheless not one ended fatally after a free and constant use of the acid. With it patients recovered more rapidly and completely than under the usual treatment.—*Cleveland Medical Gazette*.

P h a r m a c y .

SYRUP OF LACTUCARIUM, AND SOME OTHER SYRUPS.

The attention of medical practitioners has of late been turned to the syrup of lactucarium, and the preparations usually sold by apothecaries in this city is that known as Aubergier's, a French preparation, made by dissolving thirty parts of alcoholic extract of lactucarium into five hundred parts of boiling water, straining the liquor and adding it to 15,000 parts of boiling simple syrup, which is kept boiling, and albuminous water added from time to time till it is clarified. It is then skimmed, and fifteen parts of citric acid dissolved in it; and when sufficiently reduced by evaporation, 500 parts of orange-flower water are added, and the whole strained.

This syrup is too dilute, containing but two grains of lactucarium to the fluid ounce, and besides is troublesome to make and apt to be turbid.

By the following process a syrup can be obtained much more easily, of four times the strength, and quite transparent. It is an adaptation of Finley's process for syrups of oleo-resinous substances to this drug:—

SYRUPUS LACTUCARII.

R.—Lactucarium,.....	½ ounce.
Carbonate of magnesia,.....	2 drams.
Sugar, in coarse powder,.....	14 ounces.
Alcohol, water, each,.....	q. s.

Rub the lactucarium first with the carbonate of magnesia and an ounce of sugar, until thoroughly reduced to powder, and then with a fluid ounce of alcohol; after which pour in water, with constant stirring, until half a pint has been added. The whole is now poured into a paper filter; and after the liquid has ceased to pass, pour on more water until a pint has been obtained. Evaporate this liquor to nine fluid ounces by a moderate heat (150° Fah.), add the remainder of the sugar, and by the aid of the heat form a syrup, which should, when finished, measure a pint.

Syrup of lactucarium thus prepared has the sensible properties of the drug in a marked degree; is perfectly transparent, with the color of officinal paregoric at first, but becomes rather darker. Each teaspoonful contains the soluble portion of nearly two grains of lactucarium, or fifteen grains to the fluid ounce.

SYRUPUS CAPSICI.

R.—Cayenne pepper, in fine powder,.....	2 drams.
Carbonate of magnesia,.....	1 dram.
Sugar, in coarse powder,.....	14 oz. (troy).
Alcohol, water, each,.....	q. s.

Rub the Cayenne pepper first with carbonate of magnesia and sugar, and then with a fluid ounce of alcohol, and slowly pour in the water until six fluid ounces have been added. The whole is then to be transferred to a proper filter; and when the liquor has ceased to pass, pour on water until nine fluid ounces of filtered liquor are obtained. To this add the remainder of the sugar, and by a gentle heat form a pint of syrup.

Made in this manner, syrup of capsicum is a pungent, yellowish-brown syrup, each teaspoonful of which contains nearly two grains of Cayenne pepper.

SYRUPUS BALSAMI PERUVIANI.

R.—Balsam of Peru,.....	2 drams.
Carbonate of magnesia,.....	2 “
Sugar, in powder,.....	14 ounces.
Alcohol, water, each,.....	q. s.

Proceed in the manner directed for spirit of capsicum, and make a pint of syrup. I have tried this process with oubebs and its oleo-resin, with assafoetida, and some other substances where the chief virtues reside in volatile oil and resin, without a satisfactory result; but there are many others to which it may be applied.—*Amer. Jour. of Pharmacy*, May, 1860.

ITALIAN "CACHOU AROMATIQUE."

Extract of liquorice, by infusion, 100 grammes.

Water, 100 "

Dissolve in water bath, and add

Powdered catechu, 30 "

Powdered gum, 30 "

Evaporate to the consistence of an extract, and then incorporate the following substances, reduced to powder:—

Mastic, 2 grammes.

Cascarilla, 2 "

Charcoal, 2 "

Orris root, 2 "

Concentrate the mass, remove it from the fire, and then add

Oil of peppermint, 2 grammes.

Tincture of musk, 5 drops.

Tincture of amber, 5 "

Pour it on a marble, previously oiled, and roll it (by means of a roller) to the thickness of a ten-cent piece. When the mass is cold remove the oil from both surfaces, by means of unsized paper; moisten it slightly, cover it with silver paper, let it dry, and then cut it into narrow strips, and divide these into minute squares or lozenges.

This preparation, much used by smokers to destroy the smell of tobacco, is also a stomachic and carminative of a very pleasant flavor.—*Bulletin de Thérapeutique*.

TO MAKE WATER-PROOF PAPER.

Dissolve eight ounces of alum and three and three-quarters ounces of white soap in four pints of water; in another vessel dissolve two ounces of gum arabic and four ounces of glue in four pints of water. Mix the two solutions, and make the mixture hot. Immerse the paper in the mixture, and then hang it up to dry, or pass it between cylinders.

The alum, soap, glue and gum form a sort of artificial covering, which protects the surface of the paper from the action of water, and to a certain extent from fire. This paper will be very useful for packages which may be exposed to the inclemency of the weather.—*Druggists' Circular, from Monitor de la Salud*.

FORMULÆ FOR WORMS.

Furnished by Wm. Scofield, M. D., of Stamford, Conn.

R.—Fluid extract of spigelia, $\frac{1}{2}$ dram.

" " senna, 1 "

Sulphuric ether, 1 "

In ascaris lumbricoides, infecting chiefly the ileum, occurring in considerable numbers before the age of puberty, and characterized by the usual symp-

toms, give an improved cathartic pill, followed by the above prescription, and repeat if necessary. If there be much nervous disorder, in children, give the fluid extract of valerian, in proper doses; if digestion is feeble, the chalybeate preparations. In *oxyuris vermicularis*, inhabiting the rectum and lower part of the colon, an enema of

Oil of turpentine,
 Oil of pumpkin seeds, *aa.*,..... $\frac{1}{2}$ ounce.
 (Rubbed together with the yolk of an egg.)
 Warm water, 1 pint.

Mucilaginous injections relieve the intense local irritation, and thus remove the cause of the sympathetic nervous disorder.

Editorial.

THIRTEENTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.—The American Medical Association met at the chapel of Yale College, New Haven, on Tuesday, June 5, at 11 o'clock A. M., and was called to order by the President, Henry Miller, M. D., of Kentucky. The attendance was unusually large.

Dr. Jonathan Knight, of Connecticut, on behalf of the Committee of Reception, welcomed the members of the Association to the hospitalities of the city. He spoke in graphic terms of the benefits accruing to the profession, and to the world, by the annual gatherings of the Association, which kept up a good feeling between distant members of the profession. He recommended such modes of action as would advance the general interests of the profession. He gave an epitome of the gradual progress of medicine, and dwelt at length upon the improvements in surgery made during the present century, alluding to the operation of lithotripsy, the ligation of the large arteries, and the introduction of anæsthetic agents. The address was listened to with profound attention, and greeted with marked applause.

The Convention organized by electing the following officers:—

President—ELI IVES, Connecticut.

Vice-Presidents—Wilson Jewell, Pennsylvania; A. B. Palmer, Michigan; Jos. P. Logan, Georgia; Jos. N. McDowell, Missouri.

Treasurer—Caspar Wistar, Pennsylvania.

The Chairman then appointed the following gentlemen as escorts to the officers elect:—

For Escort to President—Jonathan Knight, Connecticut; Dixi Crosby, New Hampshire.

For Escort to Vice-Presidents—W. C. Sneed, Kentucky; Wm. Brodie, Michigan; Edward Warren, Maryland; R. C. Foster, Tennessee; E. J. Bowditch, Massachusetts; Lewis A. Sayre, New York; John L. Atlee, Pennsylvania; Austin Flint, Jr., Louisiana.

The Committee on Nominations reported that they recommended the next meeting of the Association to take place in Chicago, Ill., on the first Tuesday in June, 1861.

They nominated the following officers:—

Secretaries—S. G. Hubbard, Connecticut; H. A. Johnson, Illinois.

Committee of Arrangements—N. S. Davis, Illinois; G. W. Freer, do.; De Laakie Willon, do.; E. Andrews, do.; H. W. Jones, do.; Thos. Bevans, do.; J. Bloodgood, do.

On Prize Essays—Daniel Brainard, Illinois; D. L. McGugin, Iowa; M. L. Leaton, Missouri; John Evan, Illinois; A. L. McArthur, do.

Committee on Publication—F. G. Smith, Pennsylvania; Caspar Wistar, do.; S. C. Hubbard, Connecticut; R. J. Breckenridge, Kentucky; Edward Hartshorne, Pennsylvania; H. F. Askew, Delaware.

Vice-President—R. D. Arnold, Georgia, in the place of Dr. Logan, resigned.

Communications and special papers were referred to the several sections, who met in different rooms, as follows:—

Section on Anatomy and Physiology, in President Woolsey's lecture-room.

Section on Surgery, in the Geological Cabinet.

Section on General Medicine, in the Geological Cabinet.

Section on Chemistry and Materia Medica, in the Laboratory.

Section on Meteorology, Medical Topography, Epidemic Diseases, Medical Jurisprudence and Hygiene, in the Laboratory.

The Committee on Nominations then reported the following appointments on standing and special Committees, which was received and adopted, and the nominations accepted:—

Committee on Medical Literature: Frank H. Hamilton, New York; Edward Warren, Maryland; Charles A. Lee, New York; J. W. C. Ely, Rhode Island; E. H. Clark, Massachusetts.

On Medical Education: Sevin T. Jaynes, Virginia; Christopher C. Cox, Maryland; J. C. Bradbury, Maine; L. H. Steiner, Maryland; M. A. Patten, Missouri.

On the Surgical Treatment of Strictures of the Urethra: James Bryan, Pennsylvania.

On Drainage and Sewerage of Large Cities—their Influence on Public Health: A. J. Semmes, Louisville; C. Boyle, and C. M. Dove, District of Columbia.

On Puerperal Tetanus—its Statistics, Pathology and Treatment: D. L. McGugin, Iowa.

On Anemia and Chlorosis: A. P. Ayres, Indiana.

On Alcohol and its Relations to Man: J. W. Dunbar, Maryland.

On Milk Sickness: Robert Thompson, Oramel Martin, Ohio; S. W. Bemis.

On Microscopic Observations on Cancer Cells: George W. Norris, Pennsylvania.

On Blood Corpuscles: A. Sager, Michigan.

On the Hygienic Relations of Air: C. C. Cox, Maryland; Charles W. Parsons, Rhode Island.

On Quarantine: D. D. Clark, Pennsylvania; M. Snow, Rhode Island; Wilson Jewell, Pennsylvania; E. Fennner, Louisiana; J. W. Houck, Maryland.

On Medical Ethics: Paul F. Eve, Tennessee; J. A. Morphy, Ohio; N. L. Linton, Missouri; R. S. Powell, Georgia; B. F. Schenck, Pennsylvania.

On Tracheotomy in Membranous Croup: A. N. Dougherty, New Jersey; George H. Gay, Massachusetts; J. M. Minor, New York.

On the Effect of Perineal Operations for Urinary Calculi upon Procreation in the Male: J. S. White, Tennessee; J. B. McCaw, Virginia; R. C. Foster, Tennessee.

On Mercurial Fumigations in Syphilis: D. W. Yandell, Tennessee.

On the Cause and Increase of Crime, and its Mode of Punishment: W. C. Sneed, Kentucky.

On the Microscope: R. C. Stiles, Vermont.

On Gangrene of the Lungs: C. F. Allen, Vermont.

On the Relations which Electricity Sustains to the Courses of Disease: Isaac Capelbury, Indiana.

On the Morbid and Therapeutic Effect of Verbal and Moral Influences: Alfred Hitchcock, Massachusetts.

On the Causes of the Extinction of Aboriginal Races, more Especially of the Red Men of America: George Suckley, New York.

To Report on the Practical Workings of the United States Law Relating to the Inspection of Drugs and Medicines: E. R. Squibb, New York; F. Bowditch, Massachusetts; Prof. Joseph Carson, Philadelphia.

On the Causes and Treatment of Ununited Fractures: E. K. Sanbone.

On Diphtheria: Alonzo Clark, New York.

On the Effect of Stimulants in the Treatment of Fractures: John W. Russel, Ohio.

On Dislocation of the Hip and Shoulder Joints Messrs Gunn, Michigan.

To Investigate the Conditions Demanded for a Diploma of Doctor of Medicine in the various Schools and Universities of Europe: J. Baxter Upham, Massachusetts; Robert Thompson, Ohio; George O. Shattuck, Massachusetts.

Dr. Reese, chairman of the Committee on Medical Education, read an able and interesting report, with resolutions, defining the qualification and course of study of students, which elicited much discussion; and, inasmuch as this is a subject of interest to the profession, we shall recur to it next month, and shall also publish an abstract of the proceedings of meeting of medical teachers.

In respect to the fulfillment of the objects of the Association, this Convention is regarded as a highly successful one. Over five hundred delegates registered their names, representing almost every State in the Union, and in point of character and talent will compare favorably with any former meeting.

The division of the Association into sections materially facilitated the deliberations. A large number of papers were presented, and being referred to the appropriate section were considered by each. The sections held their session at the same hour in different parts of the institution.

The sections on practice of medicine, materia medica and surgery were quite largely attended by the members, as well as other spectators, and will furnish for the next volume many valuable papers.

J. KNEELAND, M. D., of South Onondaga, N. Y., writes to us concerning the seed of the *tristeum perfoliatum*, or fever root, as follows:—

"SOUTH ONONDAGA, N. Y., May 17, 1866.

"Messrs. Tilden & Co.:—Please permit me, through your journal, to inform some of your subscribers, who have written to me for information, and some of whom have also requested me to send them seeds of the "*tristeum perfoliatum*," or fever root, that I have none of the seeds, and can obtain none until they grow next fall. I failed to save any seed last year, and regret my inability to supply the demand for it which has reached me during the fall and winter from four different States. The prevalence of onychia, or whitlow, may hence be inferred, as well as the desirableness of an efficient remedy for a most grievous and often disorganizing local malady. The medical gentlemen who have applied for seed shall be supplied as soon as it grows; and I take this way of answering them all at once, through your journal.

Respectfully yours, &c.,

"J. KNEELAND."

FRANK H. YOUNG, M. D., late of the Berkshire Medical College, and with Dr. Childs, has attached himself to the "Nestorian Mission," and sails early in July, from Boston, to assume his duties of physician thereto. He carries with him the friendship and best wishes of a large circle of friends.

BEING unable to supply our correspondents and subscribers with the early numbers of our JOURNAL containing articles upon *ignatia* and *colchicum*, at their request we republish them in this number.

THE *San Francisco Medical Press*, edited by Dr. S. Hooper, Professor of Anatomy and Surgery in the University of the Pacific, of sixty-four pages, is the title of a new journal recently established.

T H E

JOURNAL OF MATERIA MEDICA.

DEVOTED TO

Materia Medica, Pharmacy, Chemistry, &c.

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Indigenous Tonics.

BY CHARLES A. LEE, M. D.

NUMBER VIII.

CERASUS SEROTINA.

(Wild Cherry—Black Cherry—Wild Black Cherry: the Inner Bark.) *Natural Order, Rosaceæ; Linnean System, Icosandria—Monogynia.*

THE genus *Cerasus*, originally instituted by Tournefort, was afterwards included in *Prunus* by Linneus, and then again separated from it by Jussieu, and became recognized by botanists generally as a distant genus. Torrey and Gray so considered it in their "Flora of North America," and described the black cherry under the name *cerasus serotina*, the name originally given it by De Candolle; while the choke cherry, called by Linneus *prunus virginiana* is named by them *cerasus virginiana*. But, as if to perpetuate this confusion, Dr. Gray, in his recent "Botany of the Northern United States," has included every species of the plum and cherry under the generic term *Prunus*; thus restoring the original name given it by Linneus, and calling the species *P. serotina*, as first named by Ehrhart. The name *Cerasus*, an Asiatic town, whence the cherry was supposed to have been derived, has always been associated with this fruit, and should, if possible, be retained; while *prunus*, the ancient classical name of the plum,

should not be abandoned for the same reason, and especially so since their botanical differences are such as to constitute distinct genera. The U. S. Pharmacopœia has always adhered to the old nomenclature, in which it is followed by the U. S. Dispensatory of Wood and Bache, calling the black cherry *P. virginiana*, not recognizing the genus *cerasus*. We deem it, however, desirable that the term *cerasus* should be used wherever the cherry tree is indicated; while *prunus* is reserved for the plum. Were this rule to be observed, the confusion which has hitherto prevailed in regard to their nomenclature would be removed.

The genus CERASUS consists of trees and shrubs, which may be divided into several natural groups or sections, founded on the mode of flowering, and the persistence or non-persistence of the leaves. We have four indigenous species within the limits of the United States, viz: *C. pumila*, dwarf cherry; *C. pennsylvanica*, wild red cherry; *C. virginiana*, choke cherry; *C. serotina*, wild black cherry. All of these possess the same medicinal properties, and are employed for the same purposes.

Physical Properties and Chemical Composition.—The wild cherry bark employed in medicine is the inner bark of the trunk and branches, though that of the roots is most active. It loses its sensible properties by age and exposure to air and light, and should therefore be kept in close-covered bottles or tight boxes, and recently dried. It is of a reddish cinnamon color, brittle, and easily pulverized, having a reddish-gray fracture, and the powder a deep fawn color. The odor when fresh, or boiled in water, resembles that of peach leaves; taste bitter and aromatic, penetrating and not disagreeable. Its sensible properties are imparted to water, hot or cold, the infusion presenting a clear reddish color not unlike Madeira wine. Boiling destroys, in a great measure, its peculiar flavor, partly from the chemical changes effected by heat, and partly from the volatilization of its active principles.

Wild cherry bark has been analyzed by different chemists, and the results do not differ in any important degree. Proctor detected in it *starch, resin, tannin, gallic acid, fatty matter, lignin, red coloring matter, salts of lime and potash, and iron*. By distilling the same portion of water successively from several different portions of the bark he also obtained *volatile oil*, associated with

hydrocyanic acid. The volatile oil resembled that from bitter almonds in its medicinal and poisonous properties, and was of a light straw color. Two drops of it proved fatal to a cat in less than five minutes. All experiments hitherto made go to show that the volatile oil and hydrocyanic acid do not exist ready formed in the bark, but are the result of the action of water upon *amygdalin*, which is one of its constant constituents. Such a change, however, necessitates also the existence of *emulsin*, or a nitrogenous principle analogous to it. Dr. Wood remarks, that as this becomes decomposed at the temperature of boiling water, we can readily understand how the properties of the bark are destroyed by decoction. But to understand this fully requires further elucidation.

It is now ascertained that both *emulsin* and *amygdalin* are contained in the leaves of the cherry laurel, peach blossoms, the inner bark of every species of *cerasus*, the root bark of the mountain ash, the kernels of the cherry, peach, plum, apricot, nectarine, bird cherry and cherry laurel, as well as the seeds of the apple, choke-berry (*pyrus arbutifolia*) and mountain ash (*P. americana*). All these produce volatile oil and prussic acid on distillation. That the hydrocyanated essential oil does not pre-exist in the bitter almond, nor in any of the substances above-named, is evident from the fact that no odor of it is given off when they are heated; nor is any removed with the fixed oil by expression, nor by the solvent action of ether. No volatile oil can be obtained from any of these substances unless water come in contact with them, when it is promptly generated, as indicated by the smell. Accordingly, not only the distilled waters of the above-named substances will be found to contain hydrocyanic acid, but also their expressed juices, diluted with water. At first sight it would appear that substances containing both *emulsin* or *synaptase*, and *amygdalin*, together with moisture, sugar, gum, &c., would necessarily generate volatile oil and hydrocyanic acid; but we are to recollect that, as in the cotyledon of the almond, the *emulsin* and *amygdalin* are in distinct cells, and have no means of acting on each other, but when bruised in water both dissolve, and decomposition immediately occurs. So it is, doubtless, in all other vegetable substances containing these principles. They are kept distinct for the very purpose of preventing such

mutual reactions, as would otherwise take place, and thus generate principles which would render them unsuited to the purposes for which they were wisely created. If we mix a solution of one part of emulsin, the animo-vegetable principle which constitutes the mass of the cotyledon of the almond, in ten of water, with ten parts of amygdalin in one hundred of water—immediate decomposition ensues, the liquor becomes milky, and has the odor of bitter almonds—it will be found to contain sugar, hydrocyanic acid, formic acid and volatile oil, while the emulsin coagulates. By such a mixture we may readily produce a prussic acid of standard strength for medicinal purposes. The above facts prove the close chemical alliance existing between the genera *amygdalus* and *cerasus*, and which probably extends to other genera of the *rosaceæ*.

Your recent very elaborate and, doubtless, accurate analysis of the inner bark of the wild cherry yields as follows:—

					<i>Per Cent.</i>
Organic Matters,	-	-	-	6476.04	92.500
Inorganic “	-	-	-	524.96	7.500
Total,	-	-	-	7000.00	100.000
<i>Per Cent.</i>					
Albumen,	-	-	-	268.00	3.757
Gum,	-	-	-	131.57	4.878
Starch,	-	-	-	164.00	2.342
Extractive,	-	-	-	152.96	2.185
Tannin,	-	-	-	70.56	1.008
Sugar,	-	-	-	62.24	0.889
Coloring Matter,	-	-	-	612.76	9.882
Particular, Nitrogenized Principle,	-	-	-	152.32	2.716
Red Resin, soluble in alcohol	-	-	-	297.28	5.675
“ “ “ ether,	-	-	-	171.52	2.450
Soluble Salts,	-	-	-	38.72	0.553
Insoluble Salts,	-	-	-	486.24	6.947
Volatile Oil,	-	-	-	“	“
Lignin, &c.,	-	-	-	428.88	60.718
Total,	-	-	-	7000.00	100.000

From the mode of conducting the analysis it was not to be expected that volatile or hydrocyanic acid should be obtained, as they do not pre-exist in the bark, as already stated; but it was expected to find some nitrogenous principle analogous to or iden-

tical with *phloridzin*, and this was detected in the proportion of 152.32 parts in 7,000. It is what imparts bitterness to the cherry bark, as well as the other products of the genera *cerasus* and *amygdalus*, and is mainly the source of their tonic properties. As might be expected, it abounds most in the bark of the root, and hence its name. It is a neutral substance, having neither acid nor alkaline reactions, consisting of carbon, hydrogen and oxygen, and occurs in white, crystallizable, silky needles; soluble in 1,000 parts of cold and in all proportions of boiling water, very soluble in alcohol, and scarcely soluble in ether, cold or hot. *Phloridzin* may be easily obtained from the bark of the root of any of our native species of *cerasus*, by boiling them successively in two separate portions of water, each sufficient to cover it, and the decoctions set aside. At the end of thirty hours they will have deposited a considerable quantity of colored *phloridzin*, which may be purified by boiling for a few minutes with distilled water and animal charcoal, filtering, repeating this process two or three times, and then allowing the solution to cool slowly. The *phloridzin* will be deposited in a crystalline form. An additional quantity may be obtained by a second evaporation. Dr. Procter, of Philadelphia, has also proved the existence of *phloridzin*, or an analogous bitter principle, in the cherry bark, by the following process:—A portion of the bark was exhausted by alcohol, and the tincture evaporated to an extract. This contained the *amygdalin*, and whatever bitter matter and tannic acid existed in the bark. The extract was triturated with water, and with gelatine, to remove the tannic acid. The liquor was then filtered, and mixed with an excess of the emulsion of sweet almonds, containing, of course, the *emulsin* necessary for causing reaction between the *amygdalin* and water. A strong odor of hydrocyanic acid was produced, which had not previously existed in the solution of the alcoholic extract. As the *emulsin* was in excess, the whole of the *amygdalin* must have been destroyed. The liquid was evaporated to a soft extract and mixed with water. Sweet almond emulsion, now added, generated no more hydrocyanic acid, and there was none of the peculiar odor of that product; yet the taste was decidedly bitter, proving the existence in the bark of a bitter principle distinct from *amygdalin*. The cold infusion, therefore, contains the tonic principle (*phloridzin*),

as well as the sedative product (hydrocyanic acid); and while boiling extracts its active matters, yet it coagulates and renders inert the emulsin, and thus prevents those reactions which result in the formation of the acid. The above analysis shows also that while the amount of tannic acid existing in cherry bark is very inconsiderable, that of resin is very great (five hundred and sixty-eight in seven thousand), and the albuminous matter equals the gum and starch united. The coloring matter is also greatly in excess compared with most of our indigenous barks.

Therapeutical Properties and Uses.—The physiological effects of the cherry bark, in moderate doses, are those of a tonic stimulant. The pulse is accelerated, and the vital energies generally invigorated. If the quantity taken be increased, and continued for several days, the action of the heart and arteries will be diminished: the pulse being reduced from seventy-five to fifty strokes in a minute, the vital forces, however, not being reduced in a corresponding degree. Indeed, some recent experiments lead to the conclusion that if the pulse be reduced in frequency by the continued use of full doses of the cold infusion of this substance it becomes, at the same time, fuller and stronger. These effects are what we generally see during the administration of tonics in hectic fever and other diseases of debility, in which, while the frequency of the arterial pulsations is considerably lessened, they become, at the same time, stronger and fuller. But as it is unsafe to reason in regard to the effects of medicinal agents, from health to disease, or *vice versa*, it may possibly be found that the cherry bark forms no exception to the general law relating to its influence over the physiological functions. With respect to its effects in certain morbid states of the system, there is scarcely any difference of opinion among practical physicians who have employed it to any great extent. They universally regard it as possessing both tonic and sedative properties, peculiarly fitting it to the treatment of a certain class of cases, and for which scarcely any substitute can be found in the whole vegetable kingdom. Such are cases of general debility, with impaired digestive function, nervous prostration and accelerated pulse; cases of hectic fever from pulmonary or other forms of scrofulous disease; and atonic dyspepsia uncomplicated with irritation or local inflammation. There are

other forms of disease to which it seems specially applicable; but before referring to them more particularly, let us consider more in detail its uses and applications in the morbid conditions already mentioned. Clinical experience has established the fact, beyond all controversy, that many cases of morbid irritability of the nervous system will be greatly benefited by the use of a cold infusion of the wild cherry bark. These cases may, or may not be, associated with pulmonary disease; but in every instance, almost, the digestive organs will be found deranged, the secretions depraved, the biliary functions disordered, and the general strength diminished. Such a condition is often the result of an attack of acute disease, as a fever or inflammation of some important organ, or it may be consequent on malarial poison, in a quantity insufficient to produce distinct paroxysms of chills and fever. In either case we have found this remedy produce admirable effects. It rarely fails, indeed, if administered in appropriate form and doses, to abate the frequency and increase the force of the pulse, while it manifestly invigorates all the functions of the body. Those effects are doubtless partly due to the local impression made upon the gastric surface, and reflected to other parts of the system through the medium of the nerves, and partly to the absorption of its active principles into the blood, which, conveyed to the nervous centres, as well as to all the tissues, imparts a special influence to the vital forces, resulting in an increase of recuperative energy. But however the fact be explained, the function of primary and secondary assimilation experiences the general alterative influence, and healthy function follows in the wake of a more healthy blood. It is universally conceded, at the present day, that the principal indication in phthisis is to improve the faulty nutrition, which may be regarded as the cause of the tubercular exudation, and strengthen the general system. Accordingly, we no longer find such drugs employed in this disease as tend to impair the tone of the digestive organs, such as antimony, squills, ipecacuanha, &c.: inasmuch as we find that as the nutritive function and the vital forces are strengthened by suitable hygienic means and internal remedies, the local as well as general symptoms yield—the disease is arrested, and possibly a cure may follow. At all events, there will be little occasion for those special remedies for cough, night-sweats, diarrhea, &c., which have

hitherto been in such general use. There is not a single article of the materia medica, endowed with any virtues whatever, which has not been recommended by some author in the treatment of tubercular consumption, till at length all have been abandoned but cod-liver oil, the hypophosphites, opiates, and demulcents, unless we except the wild cherry bark. The fish-liver oils, as nutrients, where they prove acceptable to the stomach, are exceedingly valuable, supplying and renewing, as they do, the nuclei or rudimental molecules of all structures, thus promoting in a marked degree the function of nutrition, increasing the strength as well as the flesh, and giving increment to all the textures. The hypophosphites, of late so extravagantly extolled by their manufacturers, have proved thus far an utter failure in all cacoplastic and aplastic diseases for which they are recommended, as might, indeed, have been anticipated, inasmuch as their assumed efficacy is wholly based on an erroneous theory in regard to the deficiency of free phosphorus in the system in such affections. Opiates and demulcents will always be necessary in the treatment of pulmonary tuberculosis, as palliatives, though no one supposes they can exert any curative influence whatever. As the depraved constitution of the blood in scrofulous and tuberculous subjects—there being a diminution of red globules and a preponderance of fibrin—precludes all hope of amendment until corrected by appropriate remedial measures, the intelligent physician will first aim to remove or counteract the causes which have led to such a diseased condition of the blood. Medicinal agents, strictly so called, do not stand first on his list of remedial measures, but yield in importance to a due supply of food of a nutritive and digestible quality, free access to light, and a pure, dry atmosphere; regular exercise in the open air, suitable clothing, the removal, if possible, of all depressing mental or bodily influences, and especial attention to the functions of nutrition, secretion and excretion. The proper digestion and assimilation of food is essential to all hope of amendment in such cases, and in this connection the wild cherry bark is deserving very favorable notice. Experience of their good effects in this class of cases led the ancient writers on medicine, as Hippocrates, Galen, Celsus, and others, to recommend bitters and tonic infusions in these affections; and in this they have been followed by the best

authorities of modern times, and especially by Dr. Rush, of our own country. Of these tonics, according to our own observation, no one possesses so many valuable properties as the cherry bark, in the form of cold infusion. The amount of hydrocyanic acid developed in the infusion is sufficient to allay, in a good degree, the cough and morbid irritability present, while its tonic properties invigorate the stomach and give tone to the whole digestive system. As an indirect result, the cough is abated and the colliquative sweats greatly lessened, while the appetite is improved, and diarrhea arrested. We do not say that these effects will invariably follow. There may be pathological conditions present which preclude all hope of essential benefit from any remedial agencies. But under favorable circumstances, before the disease has made great progress, and the tubercular deposition become extensive, such effects are often witnessed, and may be very confidently anticipated. No other single remedy, indeed, can be named which, while it exerts a soothing effect upon the cough, exerts so general a tonic influence over all the functions, not only without aggravating, but manifestly ameliorating any complication which may appear in the course of the malady. Nor can its beneficial effects be attained, to an equal degree, by any artificial combination of a supposed similar kind. We may add diluted hydrocyanic acid, or cherry laurel water, or some of the other narcotic or sedative articles, to a bitter tonic infusion, and we may further flavor them with *noyau*, almond emulsion, or any similar substance, and still we shall find that they yield in efficacy to nature's own combination, effected in her own laboratory. In a majority of cases of scrofulosis, under which we include all tubercular affections, we have found some of the chalybeate preparations, as iron by hydrogen, coöperate most efficiently in the curative results. Such a course, aided by proper hygienic appliances, and the use, if possible, of cod-liver oil, will place the patient under the most favorable circumstances for recovery or arrest of the disease. We can safely testify that we have not unfrequently seen confirmed tuberculosis arrested by such treatment—cases which, years ago, were pronounced hopeless, are now enjoying a comfortable state of health. It is, however, to be recollected always that the plan of cure must be appropriate to the stages and states of the disease, and the pathological conditions present. The functions of the

liver are often seriously impaired, and yet overlooked, while the great importance of promoting the digestive and assimilating processes from the very commencement of phthisis is too little regarded. While, therefore, we attach less value to drugs than to hygienic influences in the treatment of this disease, yet the former are not to be wholly proscribed, and particularly the tonic now under consideration. Let us now see what is the testimony of others regarding this point. Dr. Eberle remarks: "In phthisis, the wild cherry bark has been employed with decided benefit. I have prescribed it often in hectic fever, and in some instances with evident advantage. There is, indeed, no difficulty in perceiving how this bark may produce beneficial effects in cases of this kind. It is well known now that the prussic acid, when judiciously administered, is capable of moderating—nay, even of removing—all the symptoms attending the early stage of pulmonary consumption. The testimony we have is too respectable and numerous to admit of any reasonable doubt as to its powers in this way. Now, the wild cherry bark contains no inconsiderable portion of this acid; and it is obvious, therefore, by using the infusion of it, we employ a medicine which contains prussic acid, together with a bitter and astringent principle, dissolved in a considerable portion of water. These ingredients would appear, I think, particularly calculated to produce good effects in pulmonary consumption, by at once lessening the irritability of the system, which the prussic acid does in an eminent degree, and supporting the strength of the patient by the tonic principles which it contains. I have already stated the power which this remedy possesses, when taken in large doses, of diminishing the action of the heart and arteries, and it is doubtless by its controlling influence in this way that its action has been found so useful in diseases attended with an irritated or excited state of the circulation. It frequently lessens the frequency, tension and irritated state of the pulse; moderates the cough and profuse nocturnal perspirations; checks the diarrhea, and sustains the general strength of the system."—(*Treat. on Mat. Med.*, vol. 1, p. 302.) Prof. Wood remarks that "the joint tonic and sedative properties of this bark adapt it to the treatment of cases of general debility, with enfeebled digestion, an irritable state of the nervous system, and excessive frequency of pulse. Long before its chemical peculiari-

ties were discovered experience had established this application of the remedy. In the treatment of pulmonary consumption it has, for many years, been a favorite in this country, and before cod-liver oil came into notice was probably more relied on than any other single medicine. It was employed not only in the advanced stages, when hectic fever had set in, but from the beginning, and often as a preventive, in cases in which a strong tendency to the disease seemed to be displayed. It was given with a view of imparting tone to the digestive organs and system generally, and thereby modifying the tuberculous diathesis, and was preferred to other tonics because it was thought to produce these effects with less danger of undue excitement. Now that it is known to be positively sedative to the heart, and to the nervous system, we can better understand its usefulness in that complaint. In other forms of scrofulous disease, presenting a similar complication of debility of the digestive and nutritive functions with frequency of the pulse, it is equally indicated."—(*Treat. on Ther. and Phar.*, vol. 1, p. 292.) Numerous authorities might be quoted to the same effect.

There are other forms of disease to which it is especially applicable, as hectic fever from whatever cause produced; debility attendant on convalescence from fevers or other acute diseases; functional nervous affections attended with a frequent, irritable pulse, restlessness and loss of sleep; and functional and organic affections of the heart attended with frequent irregular pulse and an anæmic state of the system. Where there is enlargement, with thinning of the cardiac walls, the cherry bark infusion, with iron, often affords decided relief. In the treatment of such cases in the General Infirmary of Edinburgh, we have seen Prof. Alison employ iron, in combination with digitalis, with good effect; but the cherry bark is a far more suitable remedy, and will be found to produce more beneficial effects. The iron, if given, should not be combined with it, owing to the tannic acid, but given separately. As an anti-periodic its powers are feeble compared with Peruvian bark, although I have known it prove successful in many cases of a mild character. In hysteria, associated with debility and atony of the stomach, it will be found serviceable; also in asthma under similar circumstances. In the *heaves* of horses, it has long been employed by veterinary surgeons as a

remedy of decided power. As a remedy for dyspepsia it does not seem to answer as well, in a majority of cases, as the simple tonic bitters. In some instances this, doubtless, has arisen from its having been administered in too large doses. There are scarcely any cases in which other remedies will not have to be associated with it, especially small doses of mercurials or the iodides. Although not very well adapted to arrest paroxysms of an intermittent, yet it has been employed successfully as a prophylactic, as well as during convalescence where the disease has been arrested by quinine. In many of these cases in malarious districts, as we have often observed at the West, where there is a strong tendency to relapse from constant exposure to the exciting cause, the daily use of the cold infusion of this bark carries the patient along safely through the season when most liable to its recurrence, and if commenced again early in the following spring may ward off any attacks during the year. It need not be used, however, continually, nor need the infusion be very strong. From half a pint to a pint is the quantity usually taken in twenty-four hours. Used in this way, it will be found safer than quinine, and sufficiently efficacious.

There are other indications which it will fulfill, but they are perhaps sufficiently obvious without particular remark. Its therapeutic are closely connected with its physiological effects.

Preparations and Administration: Infusion, powder, prunin, fluid extract, compound fluid extract, wine, syrup, phloridzin.—The *infusion*, made with cold water, is perhaps the most eligible preparation. Half an ounce of the inner bark to a pint of water, and especially if prepared by percolation, will be of sufficient strength. One ounce of the bark, coarsely powdered, should be introduced into a common funnel, then packed somewhat coarsely, and a quart of cold water poured upon it, the point of the funnel being put into the mouth of a glass decanter. After the water has all passed it should be poured back into the funnel, and so repeated till it acquires the color of Madeira wine. Of this preparation, two fluid ounces may be given three or four times a day, or, in some cases, more frequently, if the full effect is desired, as in intermittents. The common infusion is made of the same strength, allowing it to macerate for twenty-four hours, and then strain.

The *powder* is not often used, from its liability to oppress the stomach, besides being less likely to undergo those chemical changes which are essential to its characteristic effects. The dose is from one to two drams.

Prunin, (*Tilden's*).—Under this name we understand to be included the active principles of the bark, obtained from the hydro-alcoholic solution, on evaporation, viz: the resin, tannic acid, peculiar bitter nitrogenous matter, (phloridzin?) &c. Of course, it does not contain the hydrocyanic acid, which is volatile, and therefore cannot be relied upon to produce the full characteristic effects of the bark. It will, however, serve very well as a tonic, and possesses considerable anti-periodic power. Doses of five grains of it every two hours will arrest the paroxysms of an intermittent in, perhaps, a majority of cases. Being more concentrated, and free from starch, gum, woody fibre, &c., it is far preferable to the powdered bark, and accordingly is becoming very generally substituted for it. The ordinary dose is from two to six grains. The *prunin*, or *cerasein*, of B. Keith & Co., seems to be a very impure preparation, containing chloride of soda. It is of a deep umber brown color, bitter saline taste, and recommended in doses of two grains.

Fluid Extract.—This preparation is now in pretty general use among the physicians of the United States, and so far as we know gives entire satisfaction. Many, however, from economical motives, perhaps, prefer the cold watery infusion, prepared in the way above pointed out. The dose is half an ounce, repeated according to circumstances.

Wine.—The wine of wild cherry, prepared from the inner bark or the fruit, is a very pleasant stomachic tonic, for which purpose it is best adapted. Dose, from one dram to half an ounce.

Syrup.—This is an excellent preparation, much used, although not official. It is best made by macerating four ounces of the powdered bark in twelve fluid ounces of water, for two days, placing the mixture in a percolator, returning the fluid that filters through till it comes away clear, displacing with an additional quantity of water till twelve fluid ounces of infusion are obtained, then making this into syrup with twenty-four ounces of sugar. It will, however, keep perfectly well if only half this quantity of sugar be used. The dose is from a fluid dram to a fluid

ounce. It is an admirable remedy in alleviating catarrh and the latter stages of bronchitis and whooping-cough, forming a good vehicle for ipecac, morphia, antimony, blood-root, &c., in ordinary coughs and colds. The syrup may also be prepared by adding three ounces of the fluid extract to thirteen ounces of simple syrup. Dose, two drams to one ounce.

Phloridzin.—This substance is not often found in the shops, but it is very desirable that it should become accessible to the practitioner, for there can be little doubt it stands next to quinine in anti-periodic power. Indeed, it has often been found to succeed where quinine has failed; and if it could be furnished in quantity sufficient to supply the demand, its use would soon become general. Ten grains of it, given during the paroxysms of an intermittent, will generally be found sufficient to arrest it. It is also applicable in all cases where quinine would be proper.

Cherry Pectoral.—The composition of this far-famed preparation is now very generally known. The proprietor was so kind, some years since, to communicate to us the mode of preparing it, as follows:—

℞.—Acetate of morphia, grs. iij.; tincture sanguinaria, 3 iv.; wine of ipecac, 3 v.; wine of antimony, 3 iij.; simple syrup, 3 ijs.; ol. bitter almonds, gtt. x.; alcohol, 3 j.; acetic acid, gtt. xvi. M.

This is well adapted to acute bronchitis or catarrh, the early stages of croup, pneumonia and whooping-cough, but does a vast deal of mischief in the latter stages of these diseases, as well as every stage of pulmonary tuberculosis. No one can calculate the evils caused by the indiscriminate use of such empirical preparations. It is demonstrable that all such universal cure-alls must do vastly more harm than good. This forms no exception to the rule.

Colchicum Autumnale.

By JOSEPH BATES, M. D.

(Continued from July Number.)

COLCHICUM can claim as great antiquity as almost any medicinal agent now in use. It is mentioned by Dioscorides, Galen, and the ancients. In proof of its high esteem as a therapeutical agent, we have but to consult the Pharmacopœias of the United

States, Austria, Amsterdam, Brunswick, Danish, Dublin, Edinburgh, Paris, Geneva, Hamburg, Hanoverian, London, Lisbon, Russian, Saxon, Spanish, Swedish, Wirtemberg, and many others. There are few medicinal agents for which we can claim a greater variety in regard to the quality of its operations. It is valuable as an alterative, deobstruent, or, as some would call it, adenagic. As a cathartic in many diseases in which a deobstruent is indicated, it stands unrivaled. It is also used as an emetic; but where simple emesis is indicated numerous other articles are far preferable, on account of the violence of its operation. It possesses valuable diuretic properties as well as expectorant; the two last-mentioned, as well as many other properties ascribed to it, might with propriety be referred to its adenagic qualities. The various diseases in which it has been successfully administered, and for which it has been held in high esteem in this country and Europe, are quite too numerous to mention in connection with this brief notice. I will, however, instance a few from the list that might be quoted.

M. Metta has published the case of a woman in which the powder of colchicum was employed with success as a substitute for ergot of rye. She had an abortion at the third month; but the placenta not being expelled, and the pains having ceased, ten grains of powdered root of colchicum were given, in two doses. Half an hour having elapsed without any sensible effect, the same dose was repeated. Soon the orifice of the womb dilated, uterine contractions followed, and the placenta was removed by the hand, in a state of decomposition.

Some speak highly of its use in the treatment of cholera, others in tetanus, and again it will be found to be recommended in the treatment for plague.

Dr. Aldridge speaks of colchicum as salivating patients.

It has been used for the cure of gout and rheumatism, both acute and chronic, and by many regarded as more efficient than any other agent. It is said to have the property of alleviating pain, and lowers the pulse—(by this expression, I presume the author means to convey the impression that it diminishes the frequency of the pulse.) It has been highly extolled in the treatment of dropsies.

Some recommend it for expelling the tape-worm. Cases are on record of its curing chorea, hypochondriasis and hysteria.

Authors speak highly of it in some forms or grades of asthma, and other bronchial affections, such as inflammation of the lungs, catarrh, influenza, &c.

Puerperal fevers are said to be successfully treated with colchicum.

Balber speaks favorably of it in ophthalmia.

On account of its valuable alterative properties, some rely on colchicum in gonorrhea. It has been advised as extremely efficacious in leucorrhea.

Tait speaks in exalted terms of its use in scarlatina.

Bullock gave it in erysipelas.

It is highly recommended in constipation.

The tincture of colchicum is recommended as a liniment to rheumatic joints.

Cardiac neuralgia has been successfully treated with colchicum, as well as other forms of neuralgia.

A variety of cutaneous diseases are said to be cured with colchicum.

Many other diseases might be mentioned in which this agent is said to be useful, but I have already exceeded my limits, and leave the subject to abler pens.

Helonias Dioica.

By Dr. THOMAS CLOSE, of Portchester, N. Y.

AGREEABLE to my promise, some time since, I give you a few observations concerning my experience in the use of this remedy.

My attention was called to its use by reading the article of Dr. Lee, in the April number of your journal. The only preparation I have used of it is the fluid extract. My first trial was upon a female patient seventy-eight years of age, who had for a long period been failing in health, and had become so prostrated with anasarca and abdominal dropsy as to be helpless, requiring the assistance of persons in getting from and returning to her bed. Considerable febrile action had for several months been

constantly present, with a tense pulse varying from eighty to ninety beats per minute.

Such was her condition when I commenced the use of the helonias. Her stomach was in a very irritable condition, rejecting her food and medicines. After giving the medicine, I remained and watched, with no little solicitude, its effects, expecting it would be likewise rejected; but instead I had the satisfaction of seeing it retained, and in a little time she became less restless, the moaning noise which she had been accustomed to make, almost constantly, ceased, and at the end of half an hour after it was given she fell asleep; the pulse became decidedly softer and slower than it had been for a long time.

When she awoke there was a decided increase of muscular power—more than I could have expected from its use, or that of any other remedy, in so short a time; indeed, she was able to do what she had not done for a long time without assistance. I was surprised at its effects, for Dr. Lee, in his article upon it, had given me no reason to expect so sudden and decisive a change. The increase of muscular power continued as long as she continued the use of the remedy, say about ten or twelve days, when she declined to take it any longer. During its administration I had given a teaspoonful of Dr. Squibb's concentrated spirit of nitre three times a day, without perceiving the slightest diuretic effect. Reflecting upon this, the idea was suggested of giving the nitrous ether a tonic and stomachic property, by combining it with the iodohydrargyrate of potassium. I accordingly dropped forty drops of the solution into an ounce phial, and filled it with the spirit of nitre. By the chemical action which occurred the mixture became red.

This mixture, given three times a day in teaspoonful doses, proved an active diuretic, and in anasarca of the feet and legs the disease was arrested, and the general health of the patient improved in a most unmistakeable manner. The spirits of nitre made by Dr. Squibb is fully three times as strong as that ordinarily purchased at drug stores.

Although the helonias possesses such remarkable tonic properties, I do not consider it a stimulant, for in every case where I have tried it whatever febrile action existed has been subdued. In my own case it has proved a valuable remedy, having suffered

for three or four years with dyspnoea, a sequel of spasmodic asthma—to such an extent, that really life has been but a compromise between starvation and suffocation, for, indulging in food enough to keep up any degree of strength rendered the difficulty of breathing almost insupportable. Since I began the use of the helonias I have found the difficulty gradually lessen, and I am now able to eat and breathe with comfort, and my strength not only much greater than it was when I began its use, but rapidly improving.

I have had no opportunity to make observations concerning its other properties, but shall do so and report the results, for I have reason to believe that its value as a remedial agent is not fully understood by the medical profession.

Kousso in Tape-Worm.

By Dr. GEORGE B. CURTIS, of Hawley, Wayne County, Pa.

I TAKE the liberty of sending you, for your journal, an account of three cases of tape-worm that I have had and treated within the last year, with which you can do as you think proper in regard to publishing. The cases all occurred in one family—English by birth—but they have lived in this country for five years, and lived well, as people of that nation in good circumstances generally do.

July last, Mrs. M., a middle-aged woman, of this place, requested my advice in regard to her own health and that of her children. She looked wan and debilitated; complained of giddiness, of being unusually irritable in her feelings, and of having at different periods within the last ten months great uneasiness in her bowels, followed several times of late by the passage of a yard or more of tape-worm.

She mentioned that two of her children also had all the ordinary symptoms of worms, particularly a little daughter two years old, that was sick most of the time, and had swollen lips, large abdomen, an occasional diarrhea, and had also passed a few joints of the same kind of worm. Her little son of four years had many similar symptoms, but otherwise was hale and hearty.

I advised her to try the oil of turpentine, in small doses, much after the method of Dr. Knox. Had her take half a teaspoonful three times daily, in a little compound spirits of lavender, interposing every third day with a dose of castor oil. She went through with this routine nine days in succession, passing the two last times of taking the castor oil many shreds and joints of the tape-worm (*Ienia solium*); but, as some urinary irritation was supervening, I had her stop the treatment, and use mucilaginous drinks and cold infusion of bitter barks. All the bad symptoms and feelings disappeared, her health remaining good ever since, it now being about eleven months.

I tried the same vermicide remedies with the children, but with no success. Hence I got the Abyssinian product, kousso, and gave with good results. Had the little girl take, on an empty stomach, the following:—Kousso, 3 i.; pulverized jalapa, grs. iij.; sweetened water, f. 3 ss., in teaspoonful doses every ten minutes, until all was taken. The boy, twice her age, I gave just double the dose, in the same manner; and to our happy surprise we had two large and long tape-worms in from three to four hours thereafter. The smallest one from the younger child measured twenty-five feet, the other forty-five feet in length. The worms were broken into several pieces, and I discovered no heads in either case. The children have since remained free from any of their former symptoms.

Theorizing as to the origin and propagation of this species of human parasite may be interesting and profitable, but to my mind the greatest desideratum is attained in having a safe and effectual remedy.

Cimicifuga Racemosa.

(BLACK COHOSH—BLACK SNAKE-ROOT.)

THE *cimicifuga* is so named from *cimex*, a bug, and *fugo*, to drive away, the Siberian species being used as a bugbane. It is botanically classed in the natural order *Ranunculaceæ*, and with the *Polyandria Petagynia* of the sexual system. Its scientific and common names have varied, and still are so variously used among authors as to require caution in studying the plant. They are

mainly as follows:—*Cimicifuga racemosa*, *actæa racemosa*, *actæa cimicifuga*, *macrotys racemosa*, *botrophis serpentaria* (?), *serpentaria*, *serpentaria nigra*, black snake-root, rich-weed, cohosh, black cohosh, squaw-root, rattle-weed, cohort, bugbane.

French Synonyms—Actée, Herbe St. Christophe.

German Synonyms—Fraubenförmiges Christophskraut, Schwaze Klapperschlangenwurzel.

The *cimicifuga* is a tall, stately plant, having a perennial root, and a simple herbaceous stem, rising, from a thick knotted root-stock, to the height of from three to eight feet. The leaves are few, bi-tripinnately divided, alternate, the leaflets cut-serrate. The flowers are white, in elongated, wand-like racemes; sepals 4-5, falling off soon after the flower expands; petals, or rather transformed stamens, 1-8, small, on claws, two-horned at the apex. Stamens numerous, with slender white filaments; pistils 1-8, forming dry, dehiscent pods in fruit; pods ovoid, sessile, the racemes in fruit becoming one to two feet long.

Cimicifuga exerts a tonic influence over both the serous and mucous tissues of the system, and will be found a superior remedy in the majority of chronic diseases. In all cases where acidity of stomach is present, this must first be removed, or some mild alkaline preparation be administered in conjunction with the remedy, before any beneficial change will ensue.

It possesses an undoubted influence over the nervous system, and has been successfully used in chorea, periodical convulsions, epilepsy, nervous excitability, asthma, pertussis, delirium tremens, and many spasmodic affections. Its tonic and anti-periodic virtues are well marked in remittent and intermittent fevers, and it has been found very useful in other febrile and exanthematous diseases, especially among children, when there exists a strong tendency to cerebral difficulty. It uniformly lessens the force and frequency of the pulse, soothes pain, allays irritability, and lessens the disposition to cerebral irritation and congestion. In febrile diseases it frequently produces diaphoresis and diuresis.

In doses of one dram of the tincture, repeated every hour, it has effected thorough cures of ophthalmitis conjunctiva without the aid of any local application. As a partus accelerator, it may be substituted for ergot, seldom failing to bring on speedily and powerfully the expulsive action of the uterus. After labor, it

will be found effectual in allaying the general excitement of the nervous system and relieving after-pains.

In large doses it produces vertigo, impaired vision, nausea, vomiting, and a reduction of the circulation, but no alarming narcotic effects. Green tea is said to counteract its narcotic influences.

It is used in the debility of females attendant upon uterine disorder, and in its action is thought to have an especial affinity for that organ. Dr. Hildreth has found this plant, in combination with iodine, very advantageous in the early stages of phthisis. Barton employed it as an astringent, which property it owes to the gallic acid it contains. He gave it in putrid sore-throat.

According to Mr. Tilghman, it contains gum, starch, sugar, resin, wax, tannin, gallic acid, salts of potassa, lime, iron, magnesia, &c.

Many encomiums have been passed upon the *cimicifuga* as a remedy in *chorea*. Several cases of this disease, reported by Dr. Jesse Young to have been cured, were published some years ago. Dr. Wood states that he administered it in a case of *chorea*, which rapidly recovered under its use, after the failure of purgatives and metallic tonics. He also remarks that he had derived the happiest effects from it in a case of convulsions, occurring periodically, and connected with uterine disorder. Dr. Kirkbridge always purges before he uses it; and general frictions with salt or the flesh-brush, and pustulation with croton oil over the spine, he believes to be of much value in chronic cases.

Dr. Johnson found the most acute and severe cases of rheumatism yield to its influence, not only more speedily, but more perfectly, and with less danger of metastasis to other organs than to any other form of treatment.

Dr. E. G. Wheeler affirms that he has found it useful in several cases of severe and protracted cough, especially in the chronic cough or bronchitis of old people.

In the *Western Lancel* are reported half a dozen cases of neuralgia, successfully treated by the tincture of *cimicifuga*. The writer of the article says:—"To secure the prompt therapeutic action of the *cimicifuga* it would appear important to relieve the alimentary canal of saburral secretions, and, so far as possible, remove all irregularities of the circulating fluid. I do not know

that its action tends in any manner to increase febrile reaction when present, nor to produce local determination to any particular organ; but, on the contrary, I am strongly inclined to believe, from my observations on the effects of this article, that it acts as a sedative to the heart's action. When excessive repletion or preternatural excitement of the heart and arteries is present, the constitutional action of the remedy was not manifested until these conditions were removed. Neither did it act in subverting the disease. When I am now called upon to treat an idiopathic nervous affection, I prepare the system for the use of coohosh, in the same manner as if I was going to administer quinine, to which I am strongly disposed to think it is related in its manner of action upon the nervous system. When the system is thus prepared, in idiopathic attacks of neuralgia, I place more reliance in the above-mentioned article than any other in the *ateria medica*. It is the nervous element of disease upon which the *cimicifuga* achieves its most salutary effects, and will be successful in controlling morbid action going on in that system, in proportion as it is complicated."

Its powers in rheumatic affections, and in anasarca, are greatly increased by administering it in the following combination:—

Tincture of <i>cimicifuga</i> ,	-	-	-	-	-	1 ounce.
Iodide of potassium,	-	-	-	-	-	2 drams.
Syrup of ipecac,	-	-	-	-	-	1 ounce.
Spring water,	-	-	-	-	-	2 ounces.

Mix. Give a teaspoonful three or four times a day.

In chronic bronchial disease, and in the early stage of phthisis, it has been proved to be an excellent and efficient remedy when combined with an anodyne and the tincture of bloodroot.

Tincture of <i>cimicifuga</i> ,	-	-	-	-	-	1 ounce.
" " <i>sanguinaria</i> ,	-	-	-	-	-	1 "
Sulphate of morphia,	-	-	-	-	-	2 grains.
Syrup of gum arabic,	-	-	-	-	-	2 ounces.

Mix. Give a teaspoonful when the cough is troublesome.

In the treatment of dropsy, the following is a preferred prescription, and has been employed much by an experienced practitioner in Massachusetts:—

Tincture of cimicifuga,	- - - - -	1 ounce.
" " myrrh,	- - - - -	6 drams.
Laudanum,	- - - - -	1 dram.
Tincture of red pepper,	- - - - -	1 "

Mix. Take thirty or forty drops three times a day.

CIMICIFUGIN (*the Resinoid Principle of the Cimicifuga Racemosa*).—Tonic, alterative, nervine, anti-periodic, with an especial affinity for the uterus. It does not possess the narcotic properties of the root, which, however, are preserved in the dried hydro-alcoholic extract, or the ethereal extract. Used in intermittent fevers, periodic diseases, leucorrhœa, amenorrhœgia, dysmenorrhœa, amenorrhœa, sterility, rheumatism, scrofula, and prolapsus uteri, not accompanied with an inflammatory condition of that organ or its ligatures. It has also been used in gleet, gonorrhœa, and dyspepsia, while the tincture has been found an excellent application in chronic ophthalmia.

Prof. T. V. Morrow's use of this resinoid in cases similar to those which he successfully treated with the cimicifuga, justify him in the conclusion that it is a satisfactory substitute.

The cimicifugin is also a most valuable medicine, especially as an adjunct to other remedies, in all pulmonary, rheumatic and dyspeptic symptoms, where there is a want of tone in the nervous system.

From the London Pharmaceutical Journal.

The Arsenic Eaters of Styria.

By CHARLES HEISCH, Lecturer on Chemistry at Middlesex Hospital.

At the last meeting of the Manchester Philosophical Society, I observe that Dr. Roscoe called attention to the arsenic eaters of Styria. Having for the last two years been in communication with the medical men and other residents in the districts where this practice prevails, I shall feel obliged if you will allow me, through your journal, to make known the facts I have at present collected. The information is derived mainly from Dr. Lorenz, Imperial Professor of Natural History, formerly of Salzburg, from Dr. Carle Arbele, Professor of Anatomy in Salzburg, and Dr. Kottowitz, of Neuhaus, besides several non-medical friends. If human testimony be worth anything, the fact of the existence of arsenic eaters is placed beyond a doubt. Dr. Lorenz, to whom questions were first addressed, at once stated that he was aware of the practice, but added that it is generally difficult to get hold of individual

cases, as the obtaining of arsenic without a doctor's certificate is contrary to law, and those who do so are very anxious to conceal the fact, particularly from medical men and priests. Dr. Lorenz was, however, well acquainted with one gentleman, an arsenic eater, with whom he kindly put me in communication, and to whom I shall refer again more particularly. He also says that he knows arsenic is commonly taken by the peasants in Styria, the Tyrol, and the Salzkammergut, principally by huntsmen and woodcutters, to improve their wind and prevent fatigue. He gives the following particulars:—

The arsenic is taken pure in some warm liquid, as coffee, fasting, beginning with a bit the size of a pin's head, and increasing to that of a pea. The complexion and general appearance are much improved, and the parties using it seldom look as old as they really are; but he has never heard of any case in which it was used to improve personal beauty, though he cannot say that it never is so used. The first dose is always followed by slight symptoms of poisoning, such as burning pain in the stomach and sickness, but not very severe.

Once begun, it can only be left off by very gradually diminishing the daily dose, as a sudden cessation causes sickness, burning pains in the stomach, and other symptoms of poisoning, very speedily followed by death.

As a rule, arsenic eaters are very long lived, and are peculiarly exempt from infectious diseases, fevers, &c.; but unless they gradually give up the practice, invariably die suddenly at last.

In some arsenic works near Salzburg, with which he is acquainted, he says the only men who can stand the work for any time are those who swallow daily doses of arsenic, the fumes, &c., soon killing the others. The director of these works, the gentleman before alluded to, sent me the following particulars of his own case. (This gentleman's name I suppress, as he writes that he does not wish the only thing known about him in England to be the fact that he is an arsenic eater; but if any judicial inquiry should arise which might render positive evidence of arsenic eating necessary, his name and testimony will be forthcoming.)

"At seventeen years of age, while studying assaying, I had much to do with arsenic, and was advised by my teacher, M. Bönsch, professor of chemistry and mineralogy at Eisleben, to begin the habit of arsenic eating. I quote the precise words he addressed to me: 'If you wish to continue the study of assaying, and become hereafter superintendent of a factory, more especially of an arsenic factory, in which position there are so few, and which is abandoned by so many, and to preserve yourself from the fumes which injure the lungs of most, if not of all, and to continue to enjoy your customary health and spirits, and to attain a tolerably advanced age, I advise you—nay, it is absolutely necessary, that besides strictly abstaining from spirituous liquors you should learn to take arsenic; but do not forget, when you have attained the age of fifty years, gradually to decrease your dose, till from the dose to which you have become accustomed you return to that with which you began, or even less.' I have made trial of my preceptor's prescriptions till

now, the forty-fifth year of my age. The dose with which I began, and that which I take at present, I enclose; they are taken once a day, early, in any warm liquid, such as coffee, but not in any spirituous liquors." The doses sent were No. 1, original dose, three grains; No. 2, present dose, twenty-three grains of pure white arsenic, in coarse powder. Dr. Arbelo says this gentleman's daily dose has been weighed there also, and found as above. Mr. ——— continues:—"About an hour after taking my first dose (I took the same quantity daily for three months), there followed slight perspiration with griping pains in the bowels, and after three or four hours a loose evacuation; this was followed by a keen appetite, and a feeling of excitement. With the exception of the pain, the same symptoms follow every increase of the dose. I subjoin, as a caution, that it is not advisable to begin arsenic eating before the age of twelve, or after thirty years." In reply to my question, if any harm results from either interrupting or altogether discontinuing the practice, he replies: "Evil consequences only ensue from a long-continued interruption. From circumstances I am often obliged to leave it off for two or three days, and I feel only slight languor and loss of appetite, and I resume the arsenic in somewhat smaller doses. On two occasions, at the earnest solicitations of my friends, I attempted entirely to leave off the arsenic. The second time was in January, 1855. I was induced to try it a second time, from a belief that my first illness might have arisen from some other cause. On the third day of the second week, after leaving off the dose, I was attacked with faintness, depression of spirits, mental weakness, and a total loss of the little appetite I still had; sleep also entirely deserted me. On the fourth day I had violent palpitation of the heart, accompanied by profuse perspiration. Inflammation of the lungs followed, and I was laid up for nine weeks, the same as on the first occasion of leaving off the arsenic. Had I not been bled, I should most likely have died of apoplexy. As a restorative, I resumed the arsenic eating in smaller doses, and with the firm determination never again to be seduced into leaving it off, except as originally directed by my preceptor. The results on both occasions were precisely the same, and death would certainly have ensued had I not resumed arsenic eating." One of the most remarkable points in this narrative is that this gentleman began with a dose which we should consider poisonous. This is the only case of which I have been able to obtain such full particulars, but several others have been mentioned to me by those who the knew parties, and can vouch for their truth, which I will briefly relate.

One gentleman, besides stating that he is well aware of the existence of the practice, says he is well acquainted with a brewer, in Klagenfurth, who has taken daily doses of arsenic for many years. He is now past middle life, but astonishes every one by his fresh, juvenile appearance; he is always exhorting other people to follow his example, and says: "See how strong and fresh I am, and what an advantage I have over you all! In times of epidemic fever or cholera, what a fright you are in, while I feel sure of never taking infection."

(To be concluded in our next.)

Calendula Officinalis.*(Pot Marigold.)*

By Dr. H. G. LUNGEN, of Brooksville, Florida.

I have had occasion to use the preparations of this little garden flower in severe cuts, bruises and sprains, from the recommendation given of its virtues by an old German practitioner residing in North Carolina; and I must state that I have always used it with the utmost success. From what I can learn from the old doctor, it is considered a great domestic remedy in Germany. The old housewives gather it every year with the utmost regularity; and a part of the garden is annually set aside for this plant.

They collect the plant while in flower, and carefully dry it, and from this dried plant they make a home-made tincture with brandy, though by far the most common mode of preparation is infusion and watery extract. By the Germans this remedy is a "sovereign balm."

As every one knows this plant, having seen it growing in almost every garden, or tasted it in soup, &c., I shall not offer a botanical description, but will go on to state the mode of preparation, the supposed medical virtues, and also give a few cases in which I have used it.

This remedy can be used in any kind of bruise or cut, but its effects can best be seen in incised, punctured or lacerated wounds, and those with a considerable loss of substance. One very remarkable quality is its control over the process of granulation and cicatrization; it seems to prevent suppuration—that is, to a great extent—and to force granulation and cicatrization.

In cases of amputation where it seemed impossible to regulate suppuration, and this remedy was employed, it acted well; the cure was effected by *prima intentione*, and the amount of suppuration was comparatively insignificant.

John B., aged ten years, fell down a high flight of stairs. Under lip much lacerated and bruised; severe contusion on the nose and forehead. Wound on the lip was brought together with adhesive plaster (over which tincture of calendula was applied), and over this a compress was placed soaked in water containing one ounce of the tincture of calendula to one pint of water. This was applied for three days. At the end of that time cicatrization set in without suppuration. Hardly any scar left.

Michael P., a laborer—case of complicated fracture of the leg, with large wound several inches in length, from which the tibia was laid bare. Fracture was set all right. Ordered one ounce of the tincture of calendula in sixteen ounces of ice water, for an application. This case made a speedy cure, and and but little or no pus was discharged.

This remedy has been used by the homœopathists, and is considered a great thing in their practice; but, aside from its valuable properties of healing up wounds, and as an application to bruises, &c., I don't know of its ever having been useful in medicine. Its *supposed virtues* are emmenagogue,

alterative, and anti-spasmodic. I think its mucilaginous properties might, however, be turned to account in low fevers.

The mode of preparing a tincture of this plant is to collect at the period of flowering those half open buds with which the plant is often almost covered, and dry them in the shade, crush them in a mortar, and take two ounces of them to sixteen ounces diluted alcohol; macerate a week or fortnight, and express and filter. To make the application for wounds, &c., use one ounce of the tincture to a pint of ice cold water. The distilled water has been used with success.—*Druggists' Circular*.

Kamela (*Rottlera Tinctoria*).

ITS HISTORY, PROPERTIES, MEDICAL USES, DOSES, &c.

History.—This plant was known to the Hindoos from the remotest antiquity, the fruit of which was employed by them as a remedy for worms, and also in certain skin diseases. They likewise used it for dying and printing silks, &c., but for this purpose it underwent a chemical process, viz: an alkaline solution was mixed with the powder of the fruit, which yielded a beautiful orange-brown color. But its properties have only recently been demonstrated by Drs. Anderson and Mackinnon, who first introduced it into England. Kamela belongs to the natural order *Euphorbiaceae*. It grows abundantly on the hilly districts of India, Burmah, the Philippine Islands, and the north-east portions of Australia. Its fruit ripens in February and March, when it is gathered, and the powder, which appears as an excrescence, is carefully brushed off and preserved for use.

Properties.—The powder of kamela is of a red brick color, with little or no odor and flavor, and like lycopodium it is difficultly miscible with water. Ether extracts a quantity of its resinous components, and if the solution be allowed to stand for a few days a precipitate of granular crystals is formed, which, when purified, is seen to consist of small scales of a yellowish color and satiny lustre, and named by Dr. Anderson rottlerine. Alcohol extracts its medicinal constituents most perfectly, and the tincture made with rectified spirit is found to be very suitable for administration. Its formula, on analysis, is found to be $C_{22}H_{10}O_6$. Its composition is as follows:—

Resinous coloring matter,.....	78.19
Albuminous substances,.....	7.84
Cellulose, &c.,.....	7.12
Carbon,.....	3.86
Water,.....	3.49
Volatile oil,.....	trace.
Volatile coloring matter,.....	"

Total,.....100.00

Medical Uses.—Kamela has been successfully given in cases of tænia, and Dr. Mackinnon considers it of much greater value in those cases than either koussou or turpentine. Dr. Anderson describes “ninety-five cases of tænia, in ninety-three of which the worms were expelled after the third or fourth dose.” It has been used also with very great success for tape-worm and ascariides by Dr. Arthur Leared, of the Great Northern Hospital, and by Dr. Wm. Moore, of Dublin. The *Lancet*, of May 15th, 1858, records six cases of cure of tape-worm by Dr. Ramskill, of the Royal Free Hospital. In some instances sickness, headache and purging are produced by it, but generally its administration is attended by no unpleasant result.

Dose.—In powder, the dose of this remedy is from one to three drams early in the morning, fasting. The tincture* may be given in doses of from one to two drams, night and morning, on lump sugar.—*Chemist and Druggist, London, March 19, 1860.*

Bi-Tartrate of Potassa in the Treatment of Menorrhagia.

By J. A. CHAMBERS, M. D.

My attention was directed to the use of the above remedy, in 1848, by a communication published in *Ranking's Half-Yearly Abstract of the Medical Sciences*, from Dr. Sylvester. Former experience teaching me the inefficacy of the usual remedies in the treatment of menorrhagia, I determined to use it upon the authority given, when opportunity offered, knowing its inability to do harm, if not beneficial.

I may state that you may class me among the old fogies in medicine in this respect. I love the noble profession of medicine and appreciate its improvements, but am not one of those whose enthusiasm lead them to jump at the discovery of new remedies, especially when they are energetic in their action in the treatment of disease. Remedies powerful in their action upon the human system must inevitably do harm, if no good. Therefore, *ample testimony* should only justify a physician, in *private practice*, in using them, unless as a last resort.

Believing, as I have said, in the inability of the remedy to produce harm, if no good, in such cases, I commenced the use of it in menorrhagia, and have continued its administration, when my judgment dictated its necessity, for the last twelve years, with greater success than with any one known remedy in that disease. Its action is rational, and conjoined with rest in the horizontal position, diet regulated in accordance to circumstances, with perfect quiet of mental as well as physical exertion, its effects are beneficial and speedy.

I will give the following case of recent occurrence:—Was called on the 7th of this month (June) to see Mrs. J. C., age about forty, the mother of nine

* Tincture of kamela is made by macerating half a pound of powder of kamela for fourteen days in a pint of rectified spirits of wine.

children, the youngest three years old. Has menstruated regularly up to October last, since which time she has been irregular and *hæmorrhagic*; sufficiently so to make its inroads upon her constitution. She was pale and exsanguined when I saw her, discharging freely for the last five weeks. Thinking that it was kept up by a want of tone in the muscles of the uterus, and its inability to contract, I prescribed teaspoonful doses of *vinum ergota*, repeated four or five times in the twenty-four hours, promising to call in two days. Upon my return, I ascertained that the discharge had increased, if any difference. Her bowels being very costive, I prescribed the bi-tartrate with a two-fold object: to remove costiveness and check the discharge. I directed her to take three teaspoonsful of the medicine, and put it in a sufficient quantity of boiling water to dissolve it, adding sugar sufficient to make it palatable, to let it cool, and drink the quantity in twenty-four hours; when that was gone, to use more in the same way. She did as directed, and in thirty-six hours was entirely relieved; since which time I have heard of no recurrence of it. This is but one case out of numbers in which it has thus acted.—*St. Joseph Journal of Medicine and Surgery.*

Action of Different Medicines on the Mental Faculties.

By Professor Orro.

All stimulant and exciting medicines increase the quantity of blood that is sent to the brain. If this quantity exceeds a certain amount, then most of the faculties of the mind become over-excited. Nevertheless the degree of this action is observed to vary a good deal in different cerebral organizations; and it is also found that certain stimulants exercise a peculiar and characteristic influence upon special or individual faculties. Thus ammonia and its preparations, as well as musk, castor, wine, and ether, unquestionably enliven the imaginative powers, and thus serve to render the mind more fertile and creative. The empyreumatic oils are apt to induce a tendency to melancholy, and mental hallucinations. Phosphorus acts on the instinct of propagation, and increases sexual desire; hence it has often been recommended in cases of impotence. Iodine seems to have a somewhat analogous influence; but then it often diminishes, at the same time, the energy of the intellectual powers. Cantharides, it is well known, are a direct stimulant of the sexual organs; while camphor tends to moderate and lull the irritability of these parts.

Of the metals, arsenic has a tendency to induce lowness and depression of the spirits; while the preparations of gold serve to elevate and excite them. Mercury is exceeding apt to bring on a morbid sensibility, and an inaptitude for all active occupation.

Of narcotics, opium is found to augment the erotic propensities, as well as the general powers of the intellect, but more especially the imagination. Those who take it in excess are, it is well known, liable to priapism. In

smaller doses it enlivens the ideas and induces various hallucinations, so that it may be truly said that, during the stupor which it induces, the mind continues to be awake while the body is asleep. In some persons opium excites inordinate loquacity. Dr. Gregory says that this effect is observed more especially after the use of the muriate of morphia. He noticed this effect in numerous patients, and he then tried the experiment on himself with a similar result. He felt, he tells us, while under the operation, an invincible desire to speak, and possessed, moreover, an unusual fluency of language. Hence he recommends its use to those who may be called upon to address any public assembly, and who have not sufficient confidence in their own unassisted powers.

Other narcotics are observed to act very differently on the brain and its faculties from opium. Belladonna usually impairs the intellectual energies; hyoscyamus renders the person violent, impetuous and ill-mannered. Conium dulls and deadens the intellect, and digitalis is decidedly anti-aphrodisiac. Hemp will often induce an inextinguishable gaiety of spirits; it enters into the composition of the intoxicating drink which the Indians call *bauss*. The use of the *amanita muscaria* is said to have inspired the Scandinavian warriors with a wild and ferocious courage. Tobacco acts in a very similar manner with opium, even in those persons who are accustomed to its use: almost all smokers assert that it stimulates the powers of the imagination.

If the psychological action of medicines were better known medical men might be able to vary their exhibition, according to the characters and mental peculiarities of their patients. The treatment of different kinds of monomaniacal derangement also might be much improved; and it is not improbable but that even a favorable change might be wrought on certain vicious and perverse dispositions, which unfortunately resist all attempts at reformation, whether in the way of admonition, reproof, or even of correction."—*Zeitschrift für die Gasamante Medicin, and Medico-Chirurgical Review*.

Selections.

CAFFEIN AS AN ANTIDOTE TO THE POISONOUS EFFECTS OF OPIUM.—Prof. Henry Fraser Campbell, of Georgia, in the *Southern Med. and Surg. Journal*, for May, 1860, publishes an article on this subject. After giving some account of caffein, and the use of coffee as an excitant, he describes the patient as a young man, 24 years old, who had, in a fit of mental depression, swallowed an ounce and a half of laudanum, nearly an hour before his visit—8 o'clock P. M. Narcotism had proceeded so far that emetics could not be employed; the muscles were greatly relaxed, the tongue falling back in the mouth and tending to stop respiration, and respiration exceedingly feeble. Cold water was applied to the head for a time, artificial respiration resorted to, and the stomach pump then vigorously applied. At 12 o'clock P. M. the case seemed more hopeless, respirations but four to the minute. Artificial

respiration, in a sitting posture, was then resorted to, which seemed to have a temporary good effect. Dr. Campbell then thought of coffee, but the patient could not swallow, and he doubted the propriety of using the stomach tube in the then condition of the patient. Finding it difficult to get a strong infusion of coffee, the idea of employing caffein occurred, and having dissolved twenty grains in a quantity of infusion of coffee, it was administered as an injection by means of a syringe. In half an hour the respirations were eight per minute. An hour had not elapsed before he "*forcibly jerked his left arm from the assistant,*" and told them "to let him alone." The narcotism slowly passed off, and at 10 o'clock next day, when Dr. Campbell called, the patient had left the hotel and gone home. Although the effects of the narcotism was apparent for several days, they soon wore off, and the patient entirely recovered. Dr. Campbell believes that the caffein in this case was largely concerned in the recovery, and points to that alkaloid as probably possessing valuable antidotal powers in cases of narcotic poisoning from this drug.—*American Journal of Pharmacy.*

OBSTINATE AND VIOLENT NEURALGIA OF THE UTERUS PROMPTLY RELIEVED BY THE HYDROCHLORATE OF AMMONIA.—E. J. Fountain, M. D., of Davenport, Iowa, writes to the *Cincinnati Lancet and Observer*, for July, as follows:—"Three weeks after confinement, Mrs. E—— began to experience irregular neuralgic pains through the pelvis, which in a few days manifested all the peculiarities of uterine neuralgia. It gradually increased in severity, until in about a week the suffering became excruciating, and resisted every method of treatment ordinarily followed in such cases. In order to obtain some freedom from pain, and rest at night, she took large quantities of morphine and tincture opii, with only partial relief; and as soon as the effect of the opiate passed off the pain would return with increased severity. After this extreme suffering for six or seven days, the lady seemed on the verge of insanity. Recollecting an account of a case of facial neuralgia promptly arrested by the muriate of ammonia, published in *Braithwaite's Retrospect*, I concluded to give it a trial in this case. I ordered half a dram to be taken every hour, until some effect should be produced. She began to feel some relief shortly after the first dose—still more after the second; and the third dose removed every vestige of pain, and she dropped into a natural and refreshing sleep, the first she had enjoyed for ten or twelve days. She continued taking the preparation for several days, three times each day, in gradually diminishing doses, and had not the slightest return of the difficulty."

ANTI-LACTESCENT PROPERTIES OF BELLADONNA.—"By frequent and successful trials of this article," writes Dr. E. J. Fountain, of Davenport, Iowa, to the *Cincinnati Lancet and Observer*, for July, "I have long since been perfectly satisfied that it possesses the property above indicated. I believe this is now generally acknowledged by the profession; but if any are yet skeptical, the following singular case will, I think, remove all doubt on the subject:—I was recently consulted by Mrs. H——, on account of a long-continued secre-

tion of milk, which she was unable to arrest. Three years previously she had been prematurely delivered of a still-born child, and from that time to the present milk was constantly and abundantly secreted in each breast, and she was obliged to milk it out or have it drawn out every day. Ocular demonstration was furnished me of the truth of her statement relating to the quantity of milk. She informed me that for *three years* she had tried every method she or her friends had heard of to arrest it, but all to no purpose: it was still as abundant and troublesome as ever. I immediately gave the following prescription, which I find to be about the best form of using the belladonna in such cases:—Extract belladonna, ung. glycerine, aa. 3 ij. Mix. To be rubbed freely over *all* the breast, and covered with oil-silk to protect the clothing. By the time this was all used, less than a week, the secretion of milk was entirely arrested, and has not since returned."

NUX VOMICA IN NEURALGIA.—M. Roclants, a Dutch physician, reports most favorably of the effects of this potent drug in severe cases of neuralgia of the face and other parts, and communicates at the same time the therapeutic results obtained by many of his professional friends. Out of twenty-nine severe cases a perfect cure was effected in twenty-five, and decided relief was afforded in the other four. The dose, in which the powdered nux vomica was administered, was from three to ten grains, and upwards, in the course of the twenty-four hours. In all cases its effects should be narrowly watched, as unpleasant consequences have occasionally resulted from incaution on the part of the physician. M. Roclants is inclined to regard the nux vomica as, on the whole, the most efficient and certain remedy against severe neuralgia; he has seen several cases which had resisted the prolonged administration of steel, bark, and all the other approved means, yield to its use. M. Trouseau has recently been very strongly recommending the strychnos as a most valuable remedy in obstinate chorea.—*Medico-Chirurgical Review*.

UTILITY OF MUSK IN CERTAIN CASES OF DELIRIUM.—It is M. Recamier, we believe, who has most strongly advocated the use of this powerful antispasmodic in certain forms of delirium, occurring in the course of various febrile and inflammatory diseases. When pneumonia, as in certain constitutions, and in certain epidemics, is accompanied with marked symptoms of cerebral disturbance—a very embarrassing complication—the use of musk, either alone or in combination with calomel, has been often found to be of decided advantage. It is also very useful in the delirium which not unfrequently attends the course of erysipelas, and several other exanthemata; more especially in small-pox, during the maturation and desiccation of the eruption. Dr. Roche, of Strasbourg, has recently published several very instructive cases in illustration of this practical point. The first was one of erysipelas of the face and head; the second of gangrenous sore-throat; the third of scarlatina; and the fourth of variola. In all these the musk appears to have acted very beneficially. He adds: "I have employed it also in two cases of furious mania; the violent agitation was arrested, but no other good was produced. It com-

pletely failed in a case of grave typhoid fever, and also in one of acute bronchitis, accompanied with delirium, which occurred in a middle-aged man of very intemperate habits." He closes his observations with the following general remarks:—"It appears to me that the administration of musk is indicated whenever, in the course of acute diseases, delirium supervenes without any distinctly appreciable cause, and the severity of which is not commensurate with that of the primary disease. In very many cases I have had the satisfaction of witnessing cures, which I could not certainly have anticipated before my acquaintance with this most valuable remedy. The first effect which it usually produces when successful is to induce a quiet refreshing sleep, and a general tranquilizing influence over the entire body; sometimes it induces slight nervous twitchings in the eyelids, the extremities, &c."—*Jour. des Connaiss. Med. Chir., and Medico-Chirurgical Review.*

POMADE FOR CHAPS AND FISSURES OF THE TOES.—One of the most annoying effects of secondary syphilis is the formation of fissures on the internal surface of the toes; they are usually very painful, are surrounded with a red areola, and secrete a syphilitic matter. In a few cases gangrene has been known to supervene, and to destroy one toe after another. An ointment, containing litharge, white precipitate, and a few drops of laudanum, has been used with very marked success in such cases in many of the hospitals of Germany. It is also much recommended in the serpiginous and phagedænic ulcers which occasionally supervene upon vaccination in children of a scrofulous or syphilitic constitution. The process of cicatrization is often promoted by bathing the sores, at the same time, with a decoction of hemlock and marsh mallows.—*Ibid.*

From the American Druggists' Circular, for July.

SOOT IN CANCER.—M. Debreyne states that of all local applications capable of acting upon open cancer in an efficacious way, soot, in the form of ointment or lotion, is the best, owing to its deterative, plastic and regenerative properties. He employs the following ointment:—Lard and soot, of each sixty parts; extract of belladonna, eight parts. Glycerine may be advantageously substituted for the lard. M. Debreyne, regarding the action of the soot as special, suggests its internal use in the form of tincture or extract.—*Revue Médicale.*

PROTO-IODIDE OF MERCURY IN SYPHILIS.—Prof. Sigmund, of Vienna, states that he uses this preparation less and less, for as the result of his employment of it he finds: 1. That its reputed peculiarity of not inducing salivation, whether given alone or with opium, is groundless. 2. It gives rise to diarrhea, even when combined with opium. 3. It is only applicable to certain forms of syphilis, the papular and pustular, and even in these it requires more time to take effect than do other mercurial preparations. 4. In obstinate forms of the disease it is of little or no use, while in anæmia it is posi-

tively injurious. 5. It by no means deserves the preference given to it in the treatment of children; and if these are anæmic or inclined to diarrhea it is hurtful. 6. It only deserves a trial when combined with iodide of potassium in some obstinate forms, but not in subjects disposed to catarrh of the lungs, stomach or intestines.—*Wien Wochenschrift, and Medical Times and Gazette.*

ALCOHOLIC TINCTURE OF ALOES AS A REMEDY FOR BLENNORRHEA.—This new remedy is proposed by Dr. Gamberini, a distinguished practitioner at Boulogne. A young man under his care had been afflicted for some months with a discharge, which injections of sulphate of zinc, ergotine, and per-chloride of iron had diminished to only a very slight extent. Dr. Gamberini then prescribed three injections a day of the following mixture:—Alcoholic tincture of aloes, 16 grammes; water, 120 grammes. At the end of a fortnight all trace of the discharge had completely disappeared. The use of this topical application was attended with no other inconvenience than a slight momentary smarting. Similar encouraging results have attended the use of this remedy in several other cases.—*Revue de Ther.*

PROPYLAMIN NOT A NEW REMEDY.—An old book, called “Wonderfull Secrets of Medicine,” gives the following recipe:—“For rheumatic pains take some of the oil that swims on the top of a cask of pickled salmon, and rub it on the parts affected, and in two or three days’ application it will effect a cure.”

ANTIDOTE TO STRYCHNIA.—Dr. Bewley, wishing to kill a mangy cur, and having read in Magendie’s “Report on Strychnia” that the sixteenth of a grain will kill the largest dog, determined to make sure of this very little animal by giving it about half a grain. But either Magendie’s statement was incorrect, or the drug was adulterated, for at the end of ten minutes the dog, though suffering frightfully, was not dead. Dr. Bewley resolved to put him out of his misery at once, and accordingly mixed half a dram of prussic acid with a little milk, and put it under the dog’s snout. He lapped the milk with avidity, and in less than a minute vomited, got upon his legs, ran away, and recovered.—*Medical Times and Gazette.*

LAUDANUM IN WEAK VISION OF THE AGED.—Prof. Nascar, of Naples, says that in cases of aged persons whose sight is becoming enfeebled and requires the aid of convex glasses, great advantage is derived, supposing no nervous lesion exists, from painting every evening the eyelids and brow with laudanum, and allowing this to remain on all night.—*Med. Times and Gazette.*

ECZEMA OF THE HANDS.—M. N. Guillot, of the Necker, employs the following ointment with success in the treatment of eczema of the hands:—Lard, thirty parts; sub-carbonate of soda, oil of cade, tar, of each two to four parts.—*Gazette des Hôpitaux.*

P h a r m a c y .

LIQUOR FERRI PERACETATIS.

By William Procter, Jr., of Philadelphia.

A tincture of acetate of iron has long been known as an official of the Dublin Pharmacopœia, made by double decomposition, between alcoholic solutions of the ter-sulphate of iron and of acetate of potassa.

Recently, Dr. W. R. Basham, of Westminster Hospital, London, in the *Lancet*, of June 28, 1860, has suggested a new form of acetate of iron, which he has found to answer remarkably in many other cases where other preparations of iron have disagreed with the patient, or have excited disgust. This solution is made from the official tincture of the chloride of iron and solution of acetate of ammonia, and was brought to my notice by Dr. John F. Meigs, who has frequently prescribed it.

- R.—Tinct. of chloride of iron (U. S. P.), 3 fluid drams.
 Solution of acetate of ammonia, 8 fluid ounces.
 Syrup of orange peel (or other syrup), 1 “ “
 Acetic acid, 10 minims.

Mix. Of this solution the dose is a dessert-spoonful three or four times a day.

The chemical affinities result in the formation of peracetate of iron and muriate of ammonia, with an excess of acetate of ammonia. Its impression on the palate, though astringent, is but slightly ferruginous, and has none of the inky taste of the chloride. When made without the free acetic acid, the solution undergoes change much sooner than with it. The preparation has the deep ruby red color of a solution of acetate of iron, and has a tendency to change by keeping. To give greater permanency, and a more agreeable taste, I have, after a variety of experiments, adopted the following formula as worthy of acceptance:—

LIQUOR FERRI PERACETATIS.

- R.—Acetic acid, 5 fluid ounces.
 Carbonate of ammonia (pure), q. s.
 Tincture of chloride of iron (U. S. P.), 4 fluid ounces.
 Curaçoa, 4 “ “
 Ginger syrup, 1 pint.

Reserve a fluid dram of the acetic acid, and saturate the remainder with the carbonate of ammonia, then add the acetic acid and tincture of chloride of iron, and mix them. Lastly, add the other ingredients.

This solution is about one-third stronger than the other solution, and may be given in the dose of a teaspoonful to a dessert-spoonful, mixed with a little water, three times a day, for an adult, after meals.

The proportion of sesquioxide of iron contained in this solution is three-quarters of a grain to the teaspoonful, or six grains to the fluid ounce; a des-

sert-spoonful is equal to sixteen minims of the tincture of chloride of iron, as regards its iron strength. The curaçoa cordial may be substituted by any other suitable flavoring, except such as contain astringents, which of course will blacken the preparation. A sweetened tincture of recent orange peel, slightly aromatized with canella and oil of coriander or caraway, may be used.

This preparation has proved to be a valuable tonic and diuretic. Dr. Basham recommends it very highly in renal dropsy. Dr. John F. Meigs has found it particularly serviceable in cases of children requiring a ferruginous tonic. The presence of the muriate of ammonia no doubt has a modifying influence, as well also as the small excess of acetate of ammonia. Dr. Keating has derived valuable diuretic effects from it in cases of albuminuria. In a case of dropsical effusion attendant on heart disease, with great debility, its tonic action was decidedly efficient, proving acceptable to the stomach when other preparations had occasioned disgust.—*Amer. Jour. of Pharm., July, 1860.*

SPECIES ST. GERMAIN.

By Wm. Procter, Jr., of Philadelphia.

This compound of senna and aromatics is considerably used in Philadelphia, and perhaps elsewhere. The following receipt for it is found in "Redwood's Supplement to the Pharmacopœia," translated for the Prussian Pharmacopœia:—

SPECIES LAXANTES ST. GERMAIN; SPECIES PROTHEA ST. GERMAIN; ST. GERMAIN
LAXATIVE POWDER.

Take of senna leaves, exhausted with spirit,..... 4 ounces.

" elder flowers,.....2½ "

" fennel seeds, anise seeds, of each.....1½ "

Well cut and bruise them, and mix together, and, when dispensing, add

Purified cream of tartar,.....6 drams.

The dose of this powder is eighty grains, drank as an infusion.

The object of treating the senna with alcohol is to deprive it of odorous matter, and perhaps of some resinoid matter concerned in the production of griping. The spirit used should be alcohol (0.835). When the tincture from a pound (7,000 grains) of powdered senna is evaporated to an extract, it yields 1,440 grains, which has a dark green color and strong odor of senna. Whether it possesses the purgative properties of senna to any extent we do not know, but should doubt much its purgative value. On a recent occasion, a lady who habitually uses this preparation, and about to spend some time in Europe, was desirous to have it put up in the most convenient form. We suggested that a fine powder would be very convenient, as she could take her dose (of twenty grains) in substance, stirred in a wine-glassful of water, when it was not convenient to make the infusion. Another advantage of this form of the preparation is, that it may be dispensed in bulk by the ounce or pound,

as the ingredients are uniformly mixed. The patient soon acquires by practice a knowledge of the dose by measuring with a spoon.—*Amer. Journal of Pharmacy, July, 1860.*

FLUID EXTRACT OF POLYTRICHUM JUNIPERINUM.

By Gustavus Dohme.

Take of polytrichum juniperinum, in powder,..... $\frac{3}{4}$ viij.
 " alcohol,..... q. s.
 " diluted alcohol (8 parts water, 13 parts alcohol),... q. s.

Mix the polytrichum juniperinum, in fine powder, with six ounces of alcohol, pack it firmly in a percolator, and, having placed over the surface a disk of cloth, gradually add alcohol until twelve ounces of tincture have passed; set it aside in a warm place till reduced to six ounces; continue the percolation with diluted alcohol (thirteen parts alcohol, three parts water,) until the liquid passes tasteless. Evaporate the tincture thus obtained over a water-bath to one ounce, adding to it one ounce of alcohol, to redissolve the resinous matter, and mix with the concentrated reserved tincture, and filter if necessary.

As polytrichum juniperinum is of a spongy, bulky nature, which makes tight packing for the process of percolation very difficult, I found it to answer a good purpose to first pack it with the hand as tight as possible, then place over it a perforated tin and a sufficient weight to allow the percolation to go on slowly. In following this precaution, I was able to exhaust the mass with less menstruum than in percolating it without pressure.

The fluid extract made by the above process has a dark green color and strong odor characteristic of the herb, and representing it dram for dram.—*Jour. and Trans. of Maryland College of Pharmacy, June, 1860.*

IMPROVED FORMULA FOR AROMATIC SYRUP OF RHUBARB.

By Wm. S. Thompson.

Take of rhubarb, in coarse powder, (No. 40),..... 8 ounces.
 " cinnamon, in powder, (No. 50),
 " cloves, in powder, (No. 50), of each..... $\frac{1}{4}$ ounce.
 " nutmeg, in powder, " 2 drams.
 " diluted alcohol,..... q. s.
 " sugar, refined,..... 7 pounds.

Mix the cloves, cinnamon and nutmeg; moisten slightly with diluted alcohol, and transfer to a glass funnel, having previously inserted a conical-shaped piece of sponge into the upper part of the neck. Displace until until four fluid ounces have passed through, which reserve. Mix the rhubarb with an equal bulk of washed sand and the dregs of the aromatics; moisten slightly with diluted alcohol, transfer the whole to a displacer, and add, gradually, diluted alcohol until two pints have passed through, to which add half

a pound of the sugar, and evaporate in a water-bath to one pint. Make a syrup of the remainder of the sugar and two pints of water, add the evaporated tincture, boil for a few minutes, strain, and add the reserved aromatic tincture while it is still hot. The syrup should stand at 30° Baume while boiling hot.

In following the process of the Pharmacopœia of 1850 for this syrup, a large amount of the volatile portion of the aromatic ingredients is lost by long-continued heat in evaporation. By the process above recommended, this objection is entirely obviated, and the aroma uninjured. The object of adding a small portion of sugar to the tincture before evaporation is, that it may act as a deoxidizing agent, and prevent the formation of apotheme. The amount of alcohol retained in the syrup, being only two fluid ounces in about seven pints, is too small to form a reasonable ground for objection. The syrup prepared as above retains its transparency, and contains all the aromatic properties of the ingredients.—*Jour. and Trans. of Maryland College of Pharm.*

SYRUP OF IODOHYDRARGYRATE OF IODIDE OF IRON.

M. Chamoun (*Répertoire de Pharmacie*, May, 1860,) suggests the union of iron and biniodide of mercury in the forms of syrup and pill.

Take of biniodide of mercury,..... 1 grain.

“ syrup of iodide of mercury,..... 8000 grains.

Triturate the biniodide with a portion of the syrup until dissolved, and incorporate it with the remainder. There appears to be a combination between the two iodides.—*Amer. Journal of Pharmacy*, July, 1860.

CAMPHOR IN POWDER AND OINTMENT.

Camphor may be very easily powdered by contusion in a large marble mortar, adding a small quantity of water, and passing it through a hair or silk sieve, according to the degree of fineness required. When powdered in this manner the camphor never runs into lumps, even when kept a long time. To make a good ointment, three parts of camphor, so pulverized, should be melted by aid of a bath in twelve parts of prepared lard, and the mixture, as soon as it begins to be a little cold, should be stirred from time to time until it entirely sets—thus preventing the granular crystallization always observed in ointments which are allowed to set without stirring. This ointment preserves its smoothness and consistence for a year after its preparation.—*Jour. de Chimie Médicale*.

ANODYNE POMADE.

Take of Galen's cerate,..... 31 parts.

“ extract of belladonna,..... 8 “

“ acetate of morphia (previously dissolved),..... 3 “ M.

This pomade is exceedingly useful in cases of muscular pains, chronic rheumatism, &c., when rubbed on the affected parts.—*Medico-Chirurg. Review*.

E d i t o r i a l .

AMERICAN PHARMACEUTICAL ASSOCIATION.—It will be remembered that when this Association adjourned at Boston, last September, it adjourned to meet in New York city on the second Tuesday of September, 1880. It is expected that this will be one of the largest meetings ever held of the Association; and, occurring at a time when apothecaries will desire to visit the city on business, they will be able to unite business and pleasure. We have no doubt they will receive at the hands of its resident members a liberal entertainment, and such attention as will not cause them to regret the effort, leaving out of the calculation the pleasure and profit they will receive from its discussions and deliberations.

HYPOPHOSPHITES.—In reply to correspondents, we state that in the next number we will give full formulæ for the various preparations of hypophosphites, as many of our correspondents have not met with the numerous formulæ published. The doses of the

Hypophosphite of lime is from.....	5 to 20 grains.
“ “ soda,.....	“ “
“ “ iron,.....	“ “

The syrup of hypophosphite of lime is prepared by Procter as follows:—

Take of Hypophosphite of lime,	1 ounce.
Water,	9½ fluid ounces.
White sugar,	12 ounces.
Fluid extract of vanilla,	½ fluid ounce.

Dissolve the salt in the water, filter, add the sugar, dissolve by aid of heat, and add the vanilla. The dose is from a teaspoonful (three and a half grains) to a tablespoonful (fourteen grains), according to the circumstances of the case, three times a day.

Syrup of Hypophosphite of Iron.

Take of Protosulphate of iron,	185 grains.
Carbonate of soda,	260 “
Hypophosphorous acid (sp. gr. 1.036),	f. 3 iijss or q. s.
Water,	
Sugar,	12 ounces.

Dissolve the sulphate of iron and carbonate of soda, each separately, in four fluid ounces of water, and mix the solution. Wash the precipitated carbonate of iron thoroughly with sweetened water, and drain it on a muslin filter; then transfer to a dish, add a small portion of water, heat gently, adding hypophosphorous acid till it forms a clear solution; then add water till it reaches eight fluid ounces, add the sugar, and flavor to taste. This contains very nearly one grain of hypophosphite of protoxide of iron to the ounce.

Parrish's Syrup of the Hypophosphites.

The presence of preparations of iron in these compounds was not called for by the original discoverer of their therapeutic value, who considers the alka-

line and earthy hypophosphites as superior to any of the ordinary "*hamatogens*," and in practice I believe the following very simple preparations have been found fully equal to those in which iron is introduced with an excess of hypophosphorous acid:—

Take of Hypophosphite of lime,	℥ iss.
" soda,	℥ ss.
" potassa,	℥ ss.
Sugar (com.),	℔j, 12 oz.
Hot water,	Oj f. ℥ iv.
Orange-flower water,	f. ℥ j.

Make a solution of the mixed salts in the hot water, filter through paper, dissolve the sugar in the solution by the aid of heat, strain, and add the orange-flower water. Dose, a teaspoonful, containing nearly five grains of the mixed salts.

AMERICAN MEDICAL TIMES.—The publication of the *New York Medical Journal* is suspended, and in its place is issued a new weekly with the above title. It is a large double column journal, printed on excellent paper, and contains a variety of hospital reports, original communications, reviews, &c. The motives which have induced this change will be better learned from the extract we make from its announcement:—

"Scientific medicine now partakes largely of that spirit of inquiry and restless activity which characterizes the age. In every department ardent and impulsive adventurers, with all the aids of modern invention, are enlarging the bounds of knowledge, and daily unfolding truths and principles of the greatest practical utility. These developments in the medical sciences are not now made at long intervals, but they are daily and almost hourly occurrences. He who maintains a familiar acquaintance with latest improvements, even in a single department of medicine, must, in our times, be a student of unremitting application. And not only is there an active spirit of inquiry and research in enlarging and more thoroughly exploring the domain of medical science, but our hospitals, the great repositories of accurate observation, and our schools, where these facts are reduced to systems and made available, are heartily co-operating in the great work of medical education and the diffusion of practical knowledge. This rapid development of every branch of medicine, and the increasing desire on the part of the profession at large for the earlier and more frequent dissemination of scientific intelligence, imperatively demands the co-operation of the metropolitan medical press.

"These are some of the considerations which have led to the conclusion that this journal, by a change of form and more frequent issue, might be made far more conducive to the interests of the profession, both of the city and country. However well it may have been adapted to the period of its first publication, it cannot to-day, in its present form, faithfully represent New York, with her population increased three-fold, her numerous and well appointed hospitals, her flourishing schools of medicine, and her gradual centralization of medical interests. With a full knowledge of our increased responsibilities and labors, we have, with the sole object of rendering this journal in the highest degree useful to the profession, determined to exchange bi-monthly for weekly medical journalism. We are aware that other laborers have preceded us in this field, fruitful at least in harassing cares and constant toil, and we desire to be co-workers with them in the development of its resources."

It will be edited by Dr. Stephen Smith, Dr. Elisha Harris, and Dr. George F. Shady, and is published by Balliere Bros., 440 Broadway, New York. Price \$3 per year.

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SEPTEMBER, 1860.

[No. 9.]

Indigenous Tonics.

—
BY CHARLES A. LEE, M. D.

—
NUMBER IX.

FRASERA CAROLINENSIS, (*Walter.*)

(*American Columbo—Columbia—Indian Lettuce—Yellow Gentian—Golden Seal—Curcuma—Meadow Pride—Pyramid, &c.*) Natural Order, Gentianaceæ; *Linnean System*, Tetrandria—Monogynia.

THE American Colombo is one of our handsomest native plants, and the only one of its genus as yet discovered. It flourishes in the southern and western portions of the United States, especially in Arkansas and Missouri. In the western glades of Kentucky, Rafinesque states that he has seen it ten feet high, with a pyramid of crowded blossoms, four or five feet long. It is properly a triennial, though some botanists consider it a biennial; its stem and flowers only being produced in the third year, the radical leaves being the only part of the plant which previously appear above ground, and flowering from May to July. The root is to be collected in the spring of the third year, or the autumn of the second, cut into transverse slices like columbo, and dried.

The root of the *Frasera* is triennial, very large, weighing several pounds, yellow, rugose, spindle shaped and horizontal; the whole plant smooth, from five to ten feet high, cylindrical, and solid.

The *leaves* are sessile, verticillate, entire, the radical elliptical and obtuse, long; cauline ones smaller and narrower. The *flowers* are yellowish white, numerous, and form a large pyramidal panicle. The plant seems to have been first discovered by William Bartram, and dedicated to John Fraser, a well-known and indefatigable collector in this country towards the close of the last century. It is called *American Columbo*, from the resemblance of the root, when cut into transverse slices and dried, to the foreign columbo; also, from the similarity of its medical properties. When sliced horizontally, the root closely resembles that of gentian, to which it is botanically allied, belonging to the same botanical family.

Physical and Chemical Properties.—As found in the shops, the root, the officinal portion, is in pieces of an inch or more in thickness, and irregularly circular, somewhat shrunk in the middle, consisting of a central medullary matter, and an exterior cortical portion, of a yellowish color on the cut surfaces, with a light reddish-brown epidermis. It is distinguished from the foreign columbo by the greater uniformity of its internal structure, the absence of concentric and radiating lines, and their lighter and purer yellow, without a greenish tinge, and also, by affording a dark green precipitate with the salts of iron. Its taste is bitter and sweetish; its virtues are extracted by water and diluted alcohol. The tincture throws down a precipitate upon the addition of water, but is not disturbed by tincture of galls. The bitterness of this plant is much less intense than that of gentian.

The analysis of this root by Mr. Douglass, (*Am. Jour. Pharm.* vi. 177,) showed that it contained bitter extractive, gum, tannin, gallic acid, resin, a fatty matter, sugar, &c. But no accurate analysis of it seems to have been made previous to that of the Tilden's.

According to this, the dried root yields

					<i>Per Cent.</i>
Organic Matters,	-	-	-	6591.67	94.166
Inorganic "	-	-	-	408.32	8.834
<hr/>					
Total,	-	-	-	7000.00	100.000
<hr/>					
					<i>Per Cent.</i>
Albumen,	-	-	-	81.12	1.158
Gum,	-	-	-	101.44	1.449

Coloring Matter, - - - - -	805.92	11.518
Sugar, - - - - -	256.00	8.657
Peculiar Principle, - - - - -	1096.16	15.659
Fatty Matter, - - - - -	249.00	8.428
Resin, - - - - -	775.04	11.072
Soluble Salts, - - - - -	145.92	2.084
Insoluble Salts, - - - - -	262.40	8.750
Lignin, &c., - - - - -	3286.00	46.230
<hr/>		<hr/>
Total, - - - - -	7000.00	100.000

The chemical tests of this root, already mentioned, all depend on the facts that columbo contains a large proportion of starch, and no tannin, while the fraseria, on the contrary, contains tannin but no starch. Of course a decoction of genuine columbo takes a blue color from a solution of iodine, (iodide of starch,) and tincture of galls throws down a precipitate (tannate of starch), while neither effect is produced on the fraseria. On the contrary, with the infusion of fraseria, the sulphate of iron produces a blackish color, and gelatine throws down a precipitate. By neither agent is the columbo affected. The *peculiar* principle (*fraserin*), which abounds to so great an extent in the fraseria, is, doubtless, a neutral substance, and the principal source of its medicinal properties. Being free from starch, its infusion is less liable to decomposition than that of columbo.

Therapeutical Properties and Effects.—The root when freshly dug is both emetic and cathartic, in this respect resembling most of our indigenous tonics. When carefully dried, it is a mild tonic, fulfilling the same indications as the other simple bitters. According to some writers, it combines laxative with its tonic properties, in this respect resembling rhubarb, while its sweetish bitter taste reminds us of gentian. We have, however, never observed any laxative effects from its use, except in the fresh state. In atonic affections of the digestive organs, the cold infusion proves a serviceable remedy. Raffinesque states that its internal and external use has cured extensive gangrene of the lower extremities, when bark had failed; also, that it proves successful in intermittents, and is greatly used in the western States in fevers, colics, griping, nausea, diarrhea, indigestion, &c. An infusion of the fresh root is often used as a substitute for rhubarb, in diseases of children, as well as to obviate the constipation incident to preg-

nancy. It has the advantage of not stimulating; cold water is said to add to its efficiency, and prevent nausea or emesis. A teaspoonful of the powdered fresh root, in hot sweetened water, acts as a very prompt emetic. Clayton & Schœpf speak of its having been successfully employed in jaundice, scurvy, gout, suppressed menstruation, and even hydrophobia. In many respects it seems to resemble the *menyanthes*, (*buckbean*) and fulfils the indications pointed out under that plant.

Preparations and Administration.—The *frasera* may be given in powder, infusion, fluid extract, tincture, compound tincture, syrup, and *fraserin*.

The *powder* may be given in a dose of from thirty grains to one dram; although it is not an eligible form.

The *infusion* is made in the proportion of an ounce of the bruised root to one pint of boiling water, of which the dose is from one to two fluid ounces, repeated several times a day.

The *fluid extract*, not yet introduced, would be the most eligible form, of which one to two drams would constitute a dose.

The *tincture* is chiefly valuable as a stomachic tonic, in doses of one dram.

The *compound tincture*, as a tonic, laxative, and carminative, may be prepared from the root of *frasera*, rhubarb, and gentian, each one ounce; coriander, fennel and dill seed, each two drams; cardamom, half an ounce; raisins, half a pound; diluted alcohol, three pints. Macerate for fourteen days, express, and filter through paper. Dose, one to three drams.

Fraserin is the peculiar principle, with the resin combined. Dose, from two to four grains.

The *frasera* deserves to be cultivated as an ornamental plant. There is no good reason why the *cocculus palmatus* (columbo,) should not be grown in our southern States, where both climate and soil are well adapted to its successful cultivation. Both may be propagated alike from the seed and root.

AGRIMONIA EUPATORIA, (*Agrimony*.)

Natural Order, *Rosaceæ*; Linnean System, *Icosandria—Di-pentagynia*.

This plant, which has been supposed by some botanists to have been introduced into our country from Europe, is indigenous to

North America as well as the eastern continent, and is, therefore, one of the most widely distributed plants known.

The root is perennial; the stem two to three feet high, simple, hairy, sometimes very hirsute. The leaves from four to nine inches long, interruptedly pinnate, upper ones three foliate; leaflets ovate, oval or oval lanceolate, coarsely dentate; stipules large, dentate; petioles twice larger than the calyx; racemes from six to twelve inches long, spicate; flowers yellow, on short pedicels, forming a long, simple spike; calyx tube curiously fluted with ten ribs, and surmounted with reddish, hooked bristles. There is one variety, (*hirsuta*) which is very hairy—with the leaflets narrower and more numerous; and another, which ranks more properly as a distinct species, (*A. parviflora*), which has still smaller flowers. The plant abounds in woods and dry meadows, from Canada to Florida, and throughout the western States. It flowers throughout the summer months. Both the herb and root are official.

Physical Properties and Chemical Composition.—The herb has a weak but agreeable aromatic odor, and a rough, bitterish, somewhat aromatic taste. The fragrance is strongest in the flowers. The root has similar properties, but its taste is more bitter and astringent. A volatile oil may be obtained from the plant by distillation with water.

The late analysis of this plant in your chemical laboratory, yielded as follows:—

Organic Matters,	6591.68
Inorganic “	408.32
Total,	7000.00
Gum,	869.44
Extract,	399.86
Starch,	125.00
Tannin,	192.00
Peculiar Principle,	789.84
Sugar,	96.64
Chlorophyll,	158.40
Resin,	175.84
Soluble Salts,	399.04
Insoluble Salts,	53.28
Lignin, etc.	4328.16
Total,	7000.00

The peculiar principle, (*agrimonin*) is a neutral substance, and the source of the tonic properties of the plant, as might be inferred.

Therapeutical Properties and Uses.—This plant is a mild astringent tonic, and has been employed from a very remote period, in relaxed conditions of disease, as passive hemorrhages, and chronic affections of the mucous membranes. It has enjoyed considerable reputation also, as a deobstruent in jaundice and visceral obstructions, and as an alterative in diseases of the skin. It is very doubtful, however, whether it has any alterative properties worth notice. Although this plant is included by most writers on the materia medica, among the class of astringents, yet its action as an astringent is very feeble, and its true place is among the tonics. Pliny speaks of this plant as a royal herb, named after a king, (*Eupator*) the seeds of which, he says, drank in wine, is an excellent remedy for dysentery, or bloody flux.—(*The Hist. of the World*, vol. 2, p. 220.)

The medicinal properties of this plant compared with many others already described, are feeble, and, although mentioned by most writers on the materia medica, has been very properly omitted in the more recent editions of National Pharmacopœias. Lindley states that it is celebrated as a vermifuge; also, used as an astringent gargle and lotion, and a common ingredient in "herb teas." In France a decoction of this plant, with the lees of wine, is used successfully in the treatment of sprains. Bedel and Alibert recommend it very highly, also, in hemorrhage from the bladder, and in gonorrhœa, and leucorrhœa. Pallas speaks of its good effects as a vermifuge in the lower animals.

Preparations and Doses.—The same as those of the *frasera carolinensis*, above described.

ASARUM CANADENSE.

(*Wild Ginger—Canada Snakeroot—Indian Ginger—Heart Snakeroot—Colts-foot—Broadleaf Asarabica*, &c.) Natural Order, *Aristolochiaceæ*; Linnean System, *Dodecandria Monogynia*.

Among our apetalous exogenous plants, the asarum deserves a conspicuous place. Closely allied in botanical habit to the aristolochia, it resembles it closely, also, in its therapeutical properties. Its three species, *A. canadense*, *A. virginicum*, and *A. arifolium*, the two latter species found at the south, and the first throughout

the United States, are endowed with the same medicinal virtues, and may be indiscriminately used in fulfilling the same indications.

The *A. canadense*, also, bears a close resemblance to the *A. europæum*, or *asarabica*, both in appearance and botanical character, although the latter has acrid properties, which do not belong to our species.

Canada snake root has a long, jointed, creeping, yellowish root or rhizoma, with radicles of the same color. The stem very short, dividing, before it emerges from the ground, into two long round hairy leaf stalks, each of which bears a broad kidney-shaped leaf; pubescent on both surfaces; of a rich shining light green above, red and pale or bluish beneath. A single flower stands in the fork of the stem, upon a hairy pendulous peduncle. The flower is often concealed by the loose soil or decayed vegetable matter; so that the leaves with their petioles, are the only parts that appear above the surface of the ground. There is no corolla; the calyx is very wooly, and divided into three broad concave-acuminate segments, with the ends reflexed, of a deep brownish-purple color on the inside, and of a dull purple, inclining to greenish externally. The filaments, which are twelve in number, and of unequal length, stand upon the germ, and rise with a slender point above the anthers attached to them. Near the divisions of the calyx are three filamentous bodies, which may be considered as nectaries. The pistil consists of a somewhat hexagonal germ, and a conical grooved style, surmounted by six revolute stigmas. The capsule is six-celled, coriaceous, and crowned with the adhering calyx. The plant abounds in woods and shady places, and about old decaying logs and stumps, from Canada to Florida, and flowering from April to July.

Physical Properties and Chemical Composition.—The root, which is the officinal part, together with every part of the plant, has a grateful aromatic taste and odor. As found in the shops, it is in long, more or less contorted pieces, of the thickness of a pipe-stem or larger; brownish, and wrinkled externally; whitish within, hard and brittle, and frequently furnished with short fibres. To the taste, it is slightly bitter, and very agreeably aromatic, resembling in this respect the cardamom, although it has been said to be intermediate, between that of serpentaria and ginger. The

leaves and petioles are more bitter and less aromatic than that of the root.

The recent careful analysis of this root in your laboratory, yielded.

Organic Matters, - - - - -	90.00
Inorganic Matters, - - - - -	10.00
<hr/>	
Total, - - - - -	100.000
Gum, - - - - -	6.820
Albumen, - - - - -	2.480
Starch, - - - - -	2.144
Yellow Coloring Matter, - - - - -	1.542
Bitter Principle, soluble in water, - - - - -	9.142
Peculiar Principle, soluble in alcohol, - - - - -	2.859
Sugar, - - - - -	2.649
Extractive, - - - - -	7.885
Resin, soluble in alcohol, - - - - -	2.288
Fixed Oil, - - - - -	1.542
Soluble Salts, - - - - -	8.518
Insoluble Salts, - - - - -	1.482
Lignin, &c. - - - - -	50.649
<hr/>	
Total, - - - - -	100.000

The name, *asarin*, may properly be given to the peculiar principle found in the root. It is probably neutral; Dr. Bigelow found among its constituents a light colored, pungent, and fragrant essential oil, a reddish bitter, resinous matter, starch and gum; while Rushton found in addition, fatty matter, chlorophylle, and salts of potash, lime and iron. Mr. Procter found the resin to be acrid as well as bitter, and without aromatic properties. Diluted alcohol is its most appropriate menstruum; though some of its virtues are imparted to water. Griffith supposes that the active principle is an essential oil, but this is only one of the active constituents.

Therapeutical Properties and Uses.—This plant is a stimulating tonic, possessing pretty active diaphoretic properties. It has been generally called an aromatic stimulant, but this by no means expresses its entire medicinal powers. Containing, as it does, fully nine per cent. of a soluble bitter principle; in addition to resin, a peculiar principle, a fixed and volatile oil, it combines the virtues of an aromatic stimulant, with those of a tonic. In this res-

pect resembling very closely the serpentaria, for which it is an excellent substitute. Unlike the European asarum, it has no emetic nor cathartic properties, even in large doses and in the fresh state. In Canada, it has long been used as a condiment in place of ginger, and is equally acceptable to the stomach. As a tonic it is among the milder class, though well adapted to a great variety of cases. What has been said in regard to the Virginia snake root, will apply very well to this article; we have used it in the same cases and with equal success. It has one important advantage over the aristolochia, in being far more agreeable to the taste and acceptable to the stomach. In diseases of infancy and childhood, where a stimulating tonic is indicated, we have used this root with complete success. Raffinesque recommends it in cachexia, hypochondriasis, palpitations, low fevers, convalescence, obstructions, hooping-cough, &c., in small and often repeated doses. Dr. Wood speaks highly of it as an adjuvant to tonic and purgative infusions and decoctions, in debilitated states of the alimentary canal. It might be used with advantage in exanthematous affections, where the eruption is tardy in its appearance, or has been repelled. The infusion will also be found useful in tranquilizing the stomach, and checking vomiting. The cold infusion is also a good remedy in some forms of dyspepsia. In low fevers it is a very useful, grateful tonic stimulant, improving the appetite, augmenting the strength, and promoting all the secretions. As a stomachic, it will be found suited to the same cases as cardamom and ginger. In some parts of the country, great reliance is placed upon it as an emmenagogue, as an errhine in catarrh, &c., it is in very general use. A very pleasant and medicinal wine or beer is made by adding yeast and sugar to an infusion of the whole plant.

Preparations.—Powder, tincture, fluid extract, infusion, syrup, compound tincture.

The *powder* is often used in doses of from ten to twenty or thirty grains; also, as a cephalic snuff. The *tincture* is prepared by macerating four ounces of the root in two pints of diluted alcohol; this may be used as an addition to tonic infusions, in the proportion of one or two fluid drams for each dose. A *fluid extract*, (hydro-alcoholic) might be prepared in vacuo, which would combine all the virtues of the root in the most concentrated form;

of which a dose would be from one to three fluid drams.

The *infusion* is prepared with half an ounce of the root and a pint of boiling water, in a covered vessel, of which two fluid ounces may be given for a dose. A *syrup* is prepared by adding a proper quantity of sugar to the infusion, and this will be much improved by adding one-fourth part of the tincture to it, besides preventing decomposition.

A very agreeable and useful *compound tincture of asarum* may be made as follows:—

℞. Bruised orange peel and gentian, each ℥j.; asarum, ℥ij.; cardamom seed and ginger, each ℥ss. Macerate fourteen days in two pints diluted alcohol and strain. Dose—half an ounce.

A p o c y n u m C a n n a b i n u m .

(INDIAN HEMP.)

Of the seventeen species of the genus *Apocynum*, the *Cannabinum* and *Androsæmifolium* are alone in medicinal use. These two strikingly resemble each other, though the leaves of the former are smooth, while those of the latter are pubescent; yet as many intermediate states occur, it is now considered that this difference of character does not amount to a specific distinction. They grow in similar situations, and flower about the same period.

The root is the only part which should be employed in medicine, and should be collected after the flowering season has passed and the tops begun to die; it is lactescent, and when fresh has an unpleasant, somewhat acrid, bitter taste, with a strong and disagreeable odor.

According the analyses made by Drs. Griscom and Knapp, the root contains tannin, gallic acid, gum, resin, wax, fæcula, bitter principle or apocynin, coloring matter, lignin, extractive, &c.

Its action upon the human system is well marked and energetic. It is a tonic, alterative, powerful emeto-cathartic, diaphoretic, expectorant, inducing also a tendency to sleep, independent of the exhaustion consequent upon vomiting. The evacuations brought on by it are large, feculent, watery, and are succeeded by perspiration. It is a most powerful hydragogue cathartic and diuretic.

It acts so powerfully in draining the system, that Dr. Rush called it the "vegetable trocar." Dr. Valentine Mott used it in dropsy among his clinical patients. It is suited to tonic dropsy, being too active for cases of an atonic character, where iron is advisable.

Dr. Knapp gave it in intermittent fever, pneumonic affections, dysentery, and as an alterative in enteritis. It acts as a sternutatory, and the fresh juice has been employed as an external application in cutaneous affections. As a tonic, it is admirably calculated to improve the tone of the digestive apparatus, and through this medium produce a corresponding effect upon the general system. On this account, probably, it is used in a dinner pill of some celebrity.

"Professor Merrill related to his class a case of ascites in a boy twelve years old, which was promptly relieved by this remedy, after every other treatment had failed, and the disease had progressed so far, in spite of them, that a time had been fixed for the operation of tapping. The extract was given, first, in doses of one grain, afterwards increased to two grains, three times a day. The effects were, moderate catharsis of a bilious and feculent character, free diuresis, without being profuse, and copious perspiration. Great relief and relaxation of the abdomen were obtained in the first twenty-four hours, and in five days there was no hydropic condition remaining. After this, the remedy had to be discontinued, although useful as an aperient, because of the profuse diaphoresis caused by it."—*Memph. Med. Rec.*, '54.

The following extract is from the pen of Dr. Griscom: "The Indian Hemp, when taken internally, appears to have four different and distinct operations upon the system: 1st, as an emetic; 2d, as a purgative; 3d, as a sudorific; 4th, as a diuretic. Each of these effects it produces almost invariably. Its first operation, when taken into the stomach, is that of producing nausea, if given in sufficient quantity (which need not be large,) and if this is increased, vomiting will be the result. It very soon evinces its action upon the peristaltic motions of the *prima via*, by producing copious feculent and watery discharges, particularly the latter, which action, when once excited, is very easily continued by the occasional administration of a wine-glassful of the infusion. The next operation of this remedy is upon the skin, when it displays

its sudorific properties often in a very remarkable manner. Copious perspiration almost invariably follows its exhibition, to which effect is, in a great measure, attributed by some, the powerful influence it exercises over the various forms of dropsy. The activity of its diuretic properties does not appear to be so great in many instances as in others. In some cases, the urinary secretion, although somewhat increased in quantity, is not such as to be commensurate with the effect produced on the disease by the exhibition of the medicine. In other instances, its diuretic operation has been more manifest, causing very profuse discharges of urine, and in a very short time relieving the overloaded tissues of their burden.

Dropsy, is I believe, the only morbid affection for the relief of which the powers of the plant have been brought into successful requisition. Its very active and often violent operation, would seem, in a great measure, to preclude its use in diseases which are accompanied with much febrile excitement. Yet one might readily suppose that some of its particular properties might be very advantageously sought for in some diseases where much arterial excitement was not present, especially its emetic, sudorific, and cathartic properties, each of which operations might be separately obtained from giving it in well-regulated doses."

In the treatment of secondary syphilis, it will be found a valuable agent, and should be used with other articles. The following formula is recommended:—

Apocynin,
Stillingin,
Asclepin,
Helonin.

Its great success in the treatment of dropsy has suggested the following formula:—

Podophyllin,
Asclepidin,
Jalapin,
Apocynin,
Senecin.

In typhoid fever, during the convalescing stages, it is used in combination with hydrastis or gentian. The wine of apocynum is an excellent form for administering this remedy in cases of dropsy, in that while the apocynum is producing its peculiar ef-

fects, the wine both assists it by its tonic properties and keeps up the vigor of the system.

It enters into many of the valuable compounds used by physicians, and we doubt if once a practitioner is made acquainted with its properties, he will consent to abandon its use.

Hypophosphites.

This class of preparations are being used extensively in this country in phthisis, but time enough has not elapsed to have any very reliable statistics, or information sufficiently favorable to justify their general recommendation. We have uniformly referred correspondents for information concerning these preparations to Parrish's *Practical Pharmacy*, and in the last number we intimated we should notice them more at length, as much enquiry exists concerning both their origin, use and value. In this connection, we give an interesting paper, read by Dr. Howard Townsend, of Albany, before the State Medical Society, a year since.

"The recent researches of Dr. Churchill, of Paris, into the therapeutic character and value of the Hypophosphites, in the treatment of tuberculosis, have lately attracted much attention from physicians in our own country, as well as in Europe. Consequently, some brief account of them may not prove without interest, particularly as their *unimportance* heretofore among our articles of the materia medica, have caused them to be passed over with very little or no notice in the works upon materia medica and therapeutics, to which we most commonly refer.

The salts called the hypophosphites are the result of the combination of hypophosphorous acid, with a base. Hypophosphorous acid differs from phosphorous acid in having a smaller amount of oxygen in its combination. *Hypo* being the Greek prefix in chymistry for *below* or *under*, thus hypophosphoric acid, whose chymical symbol is $2\text{P} + \text{O}$ —(two of phosphorous and one of oxygen,) is in the amount of oxygen which it contains *below* phosphorous acid, whose symbol is $2\text{P} + 3\text{O}$ —(two of phosphorous and three of oxygen.)

The hypophosphites are mostly crystallizable. When heated

until decomposed they emit phosphuretted hydrogen. They are, as regards oxydation, permanent, in the air. Several of them are soluble in alcohol, and nearly all of them soluble in water.

The hypophosphites now employed are those of lime and soda, potassa and ammonia.

Hypophosphite of lime is the most important of these salts, as it not only, by oxydation in the economy, will afford phosphate of lime in a nascent state if needed, but its reactions with the carbonates of the alkalies, afford a ready mode of obtaining the alkaline hypophosphites.

Beside these hypophosphites of lime, soda, potassa, and ammonia, which have lately become so popular, the hypophosphite of the sesqui-oxide of iron has also been much employed.

In other days the phosphate of lime enjoyed a brief popularity in the treatment of rickets, and mollities opium, where its employment seems to be indicated upon chymical grounds. In 1851, Benecke, of London, brought again into notice the phosphate of lime, as a medicine. Deeming it as essential for animals as for plants, in the formation of cells, he concluded that it might prove useful in certain pathological conditions of the system, particularly those characterized by defective nutrition, such as is evinced in the scrofulous affections generally.

Milne Edwards, of France, has, by a beautiful series of experiments upon animals during his course of lectures, proven that the *callus* in fractured bones forms much more quickly under the use of phosphate of lime, than it will when none has been administered.

Dr. John Francis Churchill, in a paper read before the Academy of Medicine, of Paris, (July 21st, 1857,) gives an interesting account of thirty-five cases of phthisis, treated by him with the hypophosphites—all being either in the second or third stages of the complaint; that is, they had either softened tubercles, or cavities in the lungs. Of these thirty-five cases he affirms that nine recovered completely, the physical signs of the disease disappearing altogether in eight of the nine cases. Eleven of the thirty-five cases improved considerably, and fourteen died, and one was yet under treatment at the time of the report.

From his experience he deduces the following conclusions in reference to the use of the hypophosphites in the treatment of phthisis.

The proximate cause, or at all events, an essential condition of the tubercular diathesis, is the decrease in the system of the phosphorus which it contains, in an oxygenizable state.

The specific remedy in the disease, consists in the use of a preparation of phosphorus, uniting these two conditions: first, of being in such a state that it may be directly assimilated, and at the same time be at the lowest possible degree of oxydation. To fulfill these two requisites, the hypophosphites of soda and lime seem the best fitted combinations, and should be given in doses varying from ten grains to a dram in the twenty-four hours, (twenty grains being Dr. Churchill's ordinary dose.)

Dr. Churchill further states that the physiological effects which he has observed produced by the hypophosphites, show that these preparations have a two-fold action—on the one hand, they increase that principle, whatever it may be, which constitutes *nervous force*, and on the other, they are the most powerful of *hæmatogens*, (*anglice*, blood producers,) being infinitely superior to all medicines of that class hitherto known.

"They seem," he further adds, "to possess in the highest degree all the therapeutical properties formerly attributed to phosphorus itself, and this, too, without any of that danger attendant upon the use of phosphorus, which has caused it to be almost proscribed as a medical agent."

By a resolution of the Academy of Medicine, of Paris, this paper of Dr. Churchill's was referred to a committee consisting of M. Louis, Trousseau, and Bouillaud. Since this paper was read by Dr. Churchill, the editor of the *Gazette Hebdomadaire*, of Paris, has been publishing an account of his observations upon patients treated by Dr. Churchill. Of *ten* cases, which he says, might be called tuberculous phthisis, with every appearance of certainty; in *one* the local disease was improved at the end of four and a half months; in *one* it remained stationary at the end of four months, and in eight the local disease was aggravated at the end of 4, 2, 3, 5, 4, 3 1-2, 4 1-2 and 3 1-2 months, respectively. As to the *general condition*, in *five* cases there was evident amelioration; in *one* there was no appreciable change, and in *four* there was aggravation.

After these results, he adds: "*It is impossible for me to attri-*

bute to the method of treatment adopted by Mr. Churchill, any influence over the progress of tubercles."

In conclusion, it may be stated, that although the hypophosphites have acquired no little reputation in the treatment of phthisis and the different forms of scrofula, yet we can scarcely, in these cases, deem their administration indicated, when we consider that there is in ordinary food more of the phosphates than the system, with its greatest demands, at all needs, which is proven by the fact of their constantly escaping with the evacuations, and also, that in those very disorders where they are now supposed to be indicated, they not unfrequently are found in excess in the blood and urine. In scrofulous cases, too, it would seem doubtful whether the want is so much that of the material for cells, as of the due power to appropriate those materials which are already furnished. We must not forget, too, in considering the action of the hypophosphites upon the economy, that in many of the reported cases of cures they have been administered in combination with cod liver oil and tonics, which, after all, may have been the active medicines."

Edward Parrish in his *Practical Pharmacy*, devotes much space to the consideration of these remedies, from which we propose to quote largely.

SALTS OF HYPOPHOSPHOROUS ACID.

"Hypophosphorous acid, as already shown, is a compound of phosphorous and oxygen, one equivalent of each, PO . It requires, however, no less than three equivalents of water to form the liquid acid, and of these, two equivalents enter into its salts, one only being replaced by bases. When heated, these salts emit phosphuretted hydrogen, a peculiar self-inflammable gas, (fire-damp) of an odor reminding some, of garlic. They are permanent in the air, but in solution, by heat, are liable to absorb oxygen; they are all soluble in water, and a few are crystalline. Several processes have been used to produce these salts. Rose recommends boiling phosphorus in a solution of caustic baryta till all the phosphorus disappears, and the vapors have no longer the garlic odor. Lime is found to answer the same purpose, and is commonly used. Hypophosphite of lime is, perhaps, the most important of these salts; by oxydation in the animal economy,

it is probably converted into readily assimilable nascent phosphate of lime, and by decomposition it furnishes the other salts of this acid. It is moreover, one of the salts most highly recommended by Dr. Churchill, to whose suggestion, in the first instance, the employment of these remedies may be traced.

Prof. Procter has brought to this subject his admirable talent for research, and has simplified it in an article in the *American Journal of Pharmacy*, vol. xxx. p. 118, from which portions of what follows are quoted.

"*Hypophosphite of Lime*.—When phosphorous is boiled with milk of lime, it gradually disappears, with evolution of spontaneously inflammable phosphuretted hydrogen, which explodes as it reaches the atmosphere with the formation of water and phosphoric acid. When the strong odor of phosphuretted hydrogen ceases to be given off, the liquid contains, besides the excess of lime, nearly half of the phosphorus as phosphate of lime, and the remainder, deducting the considerable portion which has escaped into the air as phosphuretted hydrogen, is hypophosphite of lime. According to Wurtz, more than one equivalent of water is decomposed, and the phosphuretted hydrogen is accompanied by free hydrogen. If this be true, the source of the super-oxydation of so much of the phosphorus is traceable to the resulting oxygen; but Rose is of the opinion that this oxygen is derived from the atmospheric air in contact with the boiling liquid. When the process is conducted in a flask, it requires a constant ebullition of the liquid to prevent the explosion consequent upon the entrance of the atmospheric air. To avoid this result, it has been found safer to employ a deep, open vessel. The constant evolution of gas and vapor, which keeps a froth on the surface, excludes the atmosphere in a great degree, so that the yield is not much diminished, whilst the safety and easiness of the process are greatly increased. The process should be conducted under a hood, with a strong draught, or in the open air, to avoid the disagreeable fumes which are evolved.

Take of Lime, recently burned,	-	-	4 lbs. av.
Phosphorus,	-	-	1 lb. "
Water,	-	-	5 gals.

Slake the lime with a gallon of the water, put the remainder in a deep boiler, and as soon as it boils add the slaked lime, and mix to a uniform milk.

The phosphorus is now added, and the boiling is kept up constantly, adding hot water from time to time, so as to preserve the measure as nearly as may be, until it is all oxidized and combined, and the strong odor of the gas has disappeared. The mixture froths much, and but little of the phosphorus reaches the surface. Then filter the solution through close muslin, wash out that portion retained by the calcareous residue with water, and evaporate the filtrate till reduced to six pints. The concentrated liquid should now be re-filtered, to remove a portion of carbonate of lime which has resulted from the action of the air on the lime in solution, and again evaporated till a pellicle forms, when it may be crystallized by standing in the drying-room, or the heat may be continued with stirring till the salt granulates, when it should be introduced into bottles.

Hypophosphite of lime is a white salt, with a pearly, margin-like lustre, and crystallizes in flattened prisms. Its composition, according to Wurtz, is $\text{CaO} + 2\text{HO}, \text{PO}$, the water being essential to the salt. It is soluble in six parts of cold water, and in not much less of boiling water; it is soluble slightly in diluted alcohol, but insoluble in alcohol, sp. gr. .835.

E. Scheffer prepares this by a modification of this process, which, he says, saves the great waste occurring in the above process, and has the advantage of liberating very little of the offensive gas produced by the other. He first oxydizes the phosphorus, by fusing it under water, and pumping atmospheric air into it; the phosphorus burns somewhat, and swells up, having become partially converted into oxyde of phosphorus, P_2O , and now combines with milk of lime without boiling, most readily at 130°F ., the gas given off being chiefly hydrogen, and not, as in the other case, the offensive compound of phosphorus and hydrogen, the production of which is so great an annoyance in the neighborhood of chemical manufactories.

Hypophosphite of Soda.—This is prepared by double decomposition between hypophosphites of lime and crystallized carbonate of soda.

Take of Hypophosphite of lime,	-	-	-	6 oz.
Crystallized carbonate of soda,	-	-	-	10 oz.
Water,	-	-	-	q. s.

Dissolve the hypophosphite in four pints of water, and the carbonate in a pint and a half, mix the solutions, pour the mixture on a filter, and lixiviate the precipitate of carbonate of lime, after draining, with water, till the filtrate measures six pints. Evaporate this liquid carefully, till a pellicle forms, and then stir constantly, continuing the heat till it granulates. In this state the

salt is pure enough for medical use; but if desired in crystals, treat the granulated salt with alcohol, sp. gr. .835, evaporate the solution till syrupy, and set it by in a warm place to crystallize.

Hypophosphite of soda crystallizes in rectangular tables with a pearly lustre, is quite soluble in water and in ordinary alcohol, and deliquesces when exposed to the air. Its composition is $\text{NaO} + 2\text{HO}, \text{PO}_a$.

Hypophosphite of Potassa.—This is prepared by the same process as that given above for the soda salt, substituting five and three quarter ounces of granulated carbonate of potassa, in place of ten ounces of crystallized carbonate of soda, and using half a pint instead of a pint and a half of water to dissolve it.

Hypophosphite of potassa is a white, opaque, deliquescent salt, very soluble in water and alcohol. Its greater tendency to absorb moisture renders it less eligible for prescription than the soda salt. Its composition is $\text{KO} + 2\text{HO}, \text{PO}$.

Hypophosphite of Ammonia.—This is prepared from hypophosphite of lime and sulphate or carbonate of ammonia.

Take of Hypophosphate of Lime,	- - -	6 oz.
Sesquicarbonate of ammonia, (translucent)	- - -	7.23 oz.
Water,	- - -	q. s.

Dissolve the lime salt in four pints of water, and the ammonia salt in two pints of water, mix the solutions, drain the resulting carbonate of lime, and wash out the retained solution with water. The filtrate should then be evaporated carefully to dryness, then dissolved in alcohol, filtered, evaporated, and crystallized.

The salt is deliquescent in the air, very soluble in alcohol and water, and when carefully heated evolves ammonia, and leaves hydrated hypophosphorous acid. The composition of this salt is $\text{NH}_3 + 2\text{HO}, \text{PO}$.

Hypophosphites of Iron.—There are two hypophosphites of iron in use in the preparations which follow, hypophosphite of sesquioxide, $\text{Fe}_2\text{O}_3, 3\text{PO}$, as suggested by Prof. Procter, and hypophosphite of protoxide, $\text{FeO}, 2\text{HO}, \text{PO}$, proposed by W. S. Thompson, of Baltimore. The first of these is directed to be prepared by precipitating a solution of hypophosphites of soda or ammonia with solution of sesquisulphate of iron. It is necessary to avoid the presence of an alkaline carbonate or the precipitate will be contaminated with free sesquioxide of iron. After washing the

gelatinous precipitate thrown down by the mixed liquids, which must be done with care, as in this state it is soluble, it may be dried into an amorphous, tasteless white powder, freely soluble in hydrochloric and hypophosphorous acids.

The hypophosphite of protoxide of iron is present in one of the syrups, for which recipes are given below, and is recommended in this form of preparation by being more permanent than the sesquisalt, which, as observed by W. S. Thompson, continually tends to pass into proto-salt in saccharine solution; the proto-salt is also more soluble.—(*To be continued.*)

From the London Pharmaceutical Journal.

The Arsenic Eaters of Styria.

By CHARLES HEISCH, Lecturer on Chemistry at Middlesex Hospital.

[CONCLUDED.]

Dr. Arbele writes: "Mr. Curator Kursinger, (I presume the curator of some museum at Salzburg,) notwithstanding his long professional work at Lungau and Binzgau, knew only two arsenic eaters—one the gentleman whose case has just been related, the other the ranger of the hunting district in Grossarl, named Trauner. This man was at the advanced age of eighty-one, still a keen chamois hunter, and an active climber of mountains; he met his death by a fall from a mountain height while engaged in his occupation. Mr. Kursinger says he always seemed very healthy, and every evening regularly, after remaining a little too long over his glass, he took a dose of arsenic, which enabled him to get up the next morning perfectly sober and quite bright. Prof. Fenzl, of Vienna, was acquainted with this man, and made a statement before some learned society concerning him, a notice of which Mr. Kursinger saw in the *Wiener Zeitung*; but I have not been able to find the statement itself. Mr. Krum, the pharmacist here, tells me that there is in Stursburg a well-known arsenic eater, Mr. Schmid, who now takes daily twelve, and sometimes fifteen grains of arsenic. He began taking arsenic from curiosity, and appears very healthy, but always becomes sickly and falls away if he attempts to leave it off. The director of the arsenic factory before alluded to is also said to be very healthy, and not to look so old as forty-five, which he really is.

As a proof how much secrecy is observed by those who practise arsenic eating, I may mention that Dr. Arbele says he inquired of four medical men, well acquainted with the people of the district in question, both in the towns and country, and they could not tell him of any individual case, but they knew of the custom only by report.

Two criminal cases have been mentioned to me, in which the known habit of arsenic eating was successfully pleaded in favor of the accused. The first by Dr. Kottowitz, of Neuhaus, was that of a girl taken up in that neighborhood on strong suspicion of having poisoned one or more people with arsenic; and though circumstances were strongly against her, yet the systematic arsenic eating in the district was pleaded so successfully in her favor that she was acquitted, and still lives near Neuhaus, but is believed by every one to be guilty. The other case was mentioned by Dr. Lorenz. A woman was accused of poisoning her husband, but brought such clear proof that he was an arsenic eater as fully to account for arsenic being found in the body. She was, of course, acquitted.

One fact mentioned to me by some friends is well worthy of note. They say:—"In this part of the world, when a grave-yard is full, it is shut up for about twelve years, when all the graves which are not private property by purchase are dug up, the bones collected in the charnel-house, the ground ploughed over, and burying begins again. On these occasions, the bodies of arsenic eaters are found almost unchanged, and recognizable by their friends. Many people suppose that the finding of their bodies is the origin of the story of the vampire." In the *Medicinischer Jahrbuch des Oesterreichischen Kaiserstaates*, 1822, *neuest Folge*, there is a report by Prof. Schallgruber, of the Imperial Lyceum at Gratz, of an investigation undertaken by order of government in various cases of poisoning by arsenic. After giving details of six *post-mortem* examinations, he says:—"The reason of the frequency of these sad cases appears to me to be the familiarity with arsenic which exists in our country, particularly in the higher parts. There is hardly a district in Upper Styria where you will not find arsenic in at least one house, under the name of hydrach. They use it for the complaints of domestic animals, to kill vermin, and as a stomachic to excite an appetite. I saw one peasant show another, on the point of a knife, how much arsenic he took daily, without which, he said, he could not live; the quantity I should estimate at two grains. It is said, but this I will not answer for, that in that part of the country this poison is used in making cheese; and, in fact, several cases of poisoning by cheese have occurred in Upper Styria, one not long since. The above-mentioned peasant states, I believe truly, that they buy the arsenic from the Tyrolese, who bring into the country spirits and other medicines, and so are the cause of much mischief." This report is, I believe, mentioned in "Orfila's Toxicology," and one or two other works, but I have not seen it quoted myself. It is interesting, as being early and official evidence of arsenic eating. Since I received the above information, a gentleman who was studying at this hospital told me that, when an assistant in Lincolnshire, he knew a man who began taking arsenic for some skin disease, and gradually increased the dose to five grains daily. He said he himself had supplied him with this dose daily for a long time. He wrote to the medical man with whom he was assistant, and I have been for a long time promised full particulars of the case; but beyond the fact that he took five grains of arsenic, in

the form of Fowler's solution, daily, for about six years, and could never leave it off without inconvenience, and a return of his old complaint, I have as yet not received them. I have delayed publishing these facts for some time, hoping to get information on some other points, for which I have written to my friends abroad; but as considerable delay takes place in all communications with them, I have thought it better to publish at once the information I had already received. All the parties spoken of are people on whom the fullest reliance can be placed, and who have taken much pains to ascertain the foregoing particulars. The questions which still remain unanswered are these:—

1st. Can any official report be obtained of the trials of the two people mentioned by Drs. Kottowitz and Lorenz?

2d. Do medical men in these districts, when using arsenic medicinally, find the same cumulative effects as we experience here? Or is there anything in the air or mode of living which prevents it?

3d. Can any evidence be obtained as to how much of the arsenic taken is excreted? To show whether the body gradually becomes capable of enduring its presence, or whether it acquires the power of throwing it off.

I have proposed to the gentleman who furnished me with the particulars of his own case, either to make an estimate of the arsenic contained in his own urine or fæces during twenty-four hours, or collect the same and forward them to me that I may do so, but as yet have received no answer.

Hypophosphites in some Conditions of Disease in Young Children.

By O. C. GIBBS, M. D., Frewsburg, N. Y.

November 15th, 1859, we were called to see a female child, aged 11 months. The child was of a decidedly scrofulous habit, had from the first few weeks of life been troubled with scrofulous sores and cutaneous eruptions; but at present it was suffering from an attack of pneumonia. The general and physical symptoms were all well marked. We ordered syrup of ipecacuanha, spirits of nitre, and paregoric in appropriate doses for internal remedies, and applied mustard to the chest. The patient was closely watched, yet the symptoms gradually increased in severity. On the third day, syrups ipecac. and liquorice were given in combination, and powders composed of Dover's powder, quinine, and small doses of the chalk and mercury mixture were added to the treatment. The symptoms still increased in severity; though the skin was moist, the cough was troublesome, the pulse very frequent, from 130 to 140, and unpleasant head symptoms began to manifest themselves. The ipecacuanha was abandoned, and the iodide of potassium was substituted, and wine or brandy was soon superadded to the treatment. In spite of treat-

ment, great prostration came on, the pulse was very feeble, and so frequent as to be with difficulty counted. The patient was seemingly unconscious of all surrounding objects, a constant moaning was kept up, the arms were constantly sawing the air, muscular spasms were occasionally observed, and the eyes were either strongly drawn to one side, or strabismus was added to the list of ominous symptoms. The eyes were generally open, yet at times there was no evidence of seeing. The pupils were sometimes greatly dilated, and at others as preternaturally contracted. The pectoral symptoms were upon the decline, the cough was less, and the physical signs gave evidence of an abatement of the original disease; yet all hopes of a favorable issue grew less day by day. A blister was applied over the cervical region of the spine, and croton oil applied over such places as had been the more common sites of the former cutaneous disease, with the hope of establishing an eruption not unlike that which for two or three weeks had passed away. Iodide of potassium, quinine, small and frequently repeated doses of opium for its stimulating effect were continued, and milk punch and beef tea were administered liberally.

On the evening of the 23d, the eighth day of treatment, we left our little patient, informing the mother that death would probably end the child's sufferings before morning. It was with much sorrow and regret that we gave this unfavorable prognosis. The parents were our intimate friends, and the patient was an only child. To please a friend of the parents, we had been asked to consult with a physician of limited study, and still more limited experience, and who, previously, in his intercourse with us, had so shamefully disregarded all principles of professional honor, that we were compelled, on this occasion, to decline the solicited consultation. Death, under such circumstances, would give unfriendly influence an opportunity to incite complainings and regrets. If other influences were wanting to nerve us to the fullest extent of our energies, it might be found in the fact that, though in quite active business, for more than two years, we had not lost a patient under sixty-five years of age, and we were desirous of protracting that interval to the utmost.

On our way home, we mentally reviewed the symptoms and the treatment from the beginning. That the pneumonia was gradually subsiding there could be no doubt. It was quite probable that there was no inflammation about the cerebral meninges, and that there was no effusion upon, or within the brain. It was probable that the symptoms arose from *anæmia*, and that death was about to take place because the nerve centres did not receive the requisite stimulus. Yet what treatment better than that in use could be brought in requisition, unless we practiced transfusion? This last we had never practiced, and were unwilling to commence in so young a patient. A more decided nerve stimulant and tonic was wanted. Was it to be found in our list of remedies? Strychnia was thought of; but could so powerful a remedy be safely administered, in a child so young, with hopes of beneficial results sufficiently speedy for our purpose? Reflecting thus, a conviction came over us, with the assurance almost of prescience, that the syrup of the

hypophosphites of lime and soda was the best remedy in the *materia medica*, to meet the indication presented in this case under consideration. The brain and spinal marrow contains phosphorus largely, and it is quite probable that a remedy that will supply it in an immediately available form, will supply the stimulus desired. So plausible was this reasoning to our mind, at the time, that we returned immediately back, and in the darkness of a stormy night sought our little patient again. In addition to the treatment formerly advised, we ordered five drops of the syrup of the hypophosphites of lime and soda, to be repeated every two hours. We urged a persevering use of remedies, however discouraging the circumstances, until death or improvement should take place.

On the following morning we found our patient apparently somewhat improved. The moaning was less, the strabismus and spasmodic drawing of the eyes to one side had passed away, and the sawing of the air with the hands was much diminished. Though the prostration was great, and the symptoms still very alarming, yet the general expression was one that gave us reason to hope still for a favorable issue.

The treatment was continued, and the patient made a rather slow but perfect recovery.

We are aware that any conclusions drawn from one case would be as likely to be false as true, and our readers are left to draw their own conclusions from the case. The reasonableness of the treatment of hydrocephaloid disease, with the hypophosphites, connected with the prompt and satisfactory result in the above case, have induced us to report it. Subsequent experience only can determine the value of the remedy.—*Pacific Med. and Surg. Jour.*

Antiphlogistic Powers of Morphia.

Dr. Z. Laurence relates (*Med. Times and Gaz.*, Dec. 31, 1859,) several cases of scleritis and of iritis, treated by morphia.

These cases he considers "establish an important practical fact, viz., that morphia is *per se* a powerful antiphlogistic,* capable of curing these acute inflammations of the eye, in which up to the present time bloodletting, blistering, and mercurialization have been considered necessary. As regards loss of blood, all will be agreed on the propriety of dispensing with it, where it can be done so with safety. Again, how constant an occurrence is it to see paroxysms of acute inflammations for a time apparently relieved by bloodletting, till the subsequent vascular reaction sets in, but to recur again and again and require as many repetitions of this same objectionable remedy. I would further ask surgeons and physicians, what evidence have they that in the com

*In all the cases mentioned, the patients had been using warm fomentations to the eyes before applying at the hospital.

bination of mercury and opium given with a view of 'putting the patient under the influence of mercury,' as it is termed, it is not really the *opium* which does the good, and that the mercury and its action on the mouth may not be to say the least, useless!† And I would finally ask the physicians of this country to test the powers of morphia in the treatment of the acute inflammations of the internal organs of the body."

"If we seek for an explanation," says Mr. L., "of the above very remarkable action of morphia, in reducing abnormal fullness of the vessels of the scleroic, we may find it in the relations of pain to vascular congestion. Pain has generally been regarded rather as the effect, than as the cause of the repletion of blood vessels; but it is quite an open question, whether or not in certain classes of cases the order of things may not be inverted? Such may be the case in the inflammations of the sclerotic, we have just been discussing. That, on the other hand, vascular congestion may react as a cause of pain, is not improbable. The theory I would submit is, that the action of morphia in these cases depends on its known power of reducing nervous irritability, which may be viewed as the primary cause of the inflammation. In these deep-seated inflammations of the eye this view is very much borne out by the seat of the pain; this will be found to follow strictly the branches of the fifth nerve; indeed, the precision with which the patients themselves localize the pain is very remarkable, whilst we have further evidence of the nervous nature of these cases in the intense watering of the eye (dependent on irritation of the lachrymal branch of the fifth nerve.) In this way I conceive the irritation is propagated to the vessels through the intervention of the connections existing between the fifth and sympathetic nerves."

[We cannot doubt the beneficial influence of morphia in some cases of inflammation of the eye, especially those attended with severe pain, but we must be cautious not to generalize too far, as Mr. L., seems to us to have done. One of the cases related by Mr. L., illustrates this, for in it (a case of scleritis,) morphia entirely failed to afford relief, and the patient was subsequently cured by leeches, blisters, and mercurialization.]—*Pac. Med. and Surg. Jour.*

Nitrous Oxide.

By GEORGE J. ZIEGLER, M. D.

Nitrous Oxide—Its Properties and Applications.—Among other events of pre-eminent importance, the present era has seen the realization of that long dream of the past for a practical method of speedily producing general in-

† Again, mercury is presumed to have an "absorbing power" over plastic effusions, such as occur in acute iritis: here, too, it is a fair question whether the absorption of the inflammatory exudations is not rather a natural process, supervening on the cessation of the inflammation, (such as we daily see in the absorption of divided cataracts, after the operation by solution, as soon as the inflammatory consequences of the operation have passed off,) than any, if I may be allowed the expression, "mercurial" process?

sensibility in order to obviate pain and suffering, and facilitate those mutilations of the animal organism which are unhappily so frequently necessary. The practical exposition of this great thought of the past in the discovery of the means for the production of that state of insensibility now known as anæsthesia, affords a striking illustration of the truth of the proverb that the dreams of one age become the realities of another. The general history of the development of this grand idea, from its original conception to its final culmination and practical demonstration, shows how gradually but surely knowledge progresses from one point to another through successive periods of time. All honor, then, to those who conceived the idea and those who perfected this noble discovery of anæsthesia! That to Dr. Horace Wells belongs the credit of the practical exposition of this great truth there is now but little doubt, yet it must be admitted that he was unfortunate in the selection of the particular agent—nitrous oxyde—for its experimental illustration. For, notwithstanding the general belief upon the subject founded mainly upon his experiments, it is very doubtful whether this agent will produce true anæsthesia at all—the general experience of those who have experimented with it most largely being in opposition to this view. This opinion is sustained by the fact that, notwithstanding the peculiar effects of the laughing gas upon the human system, led Sir Humphrey Davy to suggest that “as nitrous oxyde, in its *extensive operation appears capable of destroying pain*, it may probably be used with advantage during surgical operations in which no great effusion of blood takes place;” yet they were not sufficiently striking in this respect to induce him to attempt any such practical application of his thought. This was contrary to his usual practice, for he was ever alive to the slightest opportunity for a new discovery. That the nitrous oxyde does produce a high degree of pleasurable excitement, during which the mind may be so entranced as to become temporarily indifferent to, or even unconscious of, impressions made upon the organism, there is little doubt; but that it reduces the cerebro-spinal or general nervous system to a state of insensibility like that produced by those representative anæsthetics, chloroform and ether, is contrary to general experience. Indeed, this seems to prove that its influence upon the animal economy is directly opposite and antagonistic to that of such agents. In reality it differs therefrom not only in properties, but also in constitution; for they are composed largely of the elements hydrogen and carbon, while its sole and exclusive constituents are oxygen and nitrogen. Moreover a very general analysis of its physiological properties and therapeutical influences will also show that it differs as widely in these respects from the well-recognized anæsthetics as it does in constitution. Thus, for instance, in the case of chloroform: this directly prevents aeration of the blood, if it does not also deoxidize that fluid, depresses the cerebral and general nervous system, causes relaxation of the muscular and other contractile tissues, paralyzes the heart, and thus produces death,—its tendency being, in fact, to depress the vital energies and destroy life by direct and positive sedation. Ether, on the other hand, is primarily somewhat

Case of Chronic Sciatica.

By G. P. HACHENBERG, M. D., Coxsackie, N. Y.

Mr. Edward H—, age 45, a ship carpenter of this place, suffered severely with sciatica for about a year. He was the subject of medical treatment of several physicians, and quacks of homœopathic and hydropathic order. In New York, an Aesculapius put him in a hot steam oven, in order to sweat the pain out of him; but all to no purpose. He was of powerful frame and constitution, and temperate in his habits.

He became my patient late last fall. The following is an abstract of my case-book of the case:—

Pathological basis of the treatment.—Chronic inflammation of the neurilemma of the sciatic nerve with several of its branches.

1. The *prima viâ* corrected with podophyllin, mercury, quinine, and low diet.

2. An alterative action of the bowels kept up by podophyllin, aloes and blue mass.

3. After having secured the highest normal condition of the chylipoietic organs, an array of nervines were brought to bear against the characteristic irritability of the complaint, ever bearing in mind its inflammatory nature—the supposed inflammation of the neurilemma, with a weakened and irritable condition of the nerves.

4. *Special treatment.*—Owing to an idiosyncrasy of the internal use of opium, causing painful strangury, it was entirely dispensed with. The first favorable effects on the pain was induced by the heroic administration of sulphate of quinine, with morphine and creasote acupuncture. When the former could not be borne any longer with impunity, and the latter began to lose their effects, the remedies were alternated with the internal use of Fowler's solution, and externally, the veratria ointment. When the disease appeared to hold itself in *statu quo*, we broke into this habit—locally by unloading the veins over the regions of the pain, and constitutionally by the use of the wine of colchicum. Towards the last we alternated the arsenic by the use of the iodide of potassium, with the object of more effectually to break up the patients arthritic diathesis. In this we only succeeded by staggering considerably the constitutional stamina of health, but with a jealous care kept the temporary impairment of health within the limits of a functional character. As we proceeded with the treatment, the pain became less. In his early convalescence, the patient contrary to his wish and disposition, was urged to use his limbs by walking several miles a day. With this exercise we favored the stomach and general system again with an alterative and tonic treatment. He became rapidly convalescent, both from medicine and disease. The pain disappeared, and the numbness that remained I ordered to be *worked out* by walking and hard labor out doors.

The application of electricity injudiciously applied, brought about a relapse after the patient had been nearly well, which took one of the three months he was under our treatment, to gain what was lost by this agency.—*Cincinnati Med. and Surg. News.*

Relations of Belladonna and Opium, and Poisoning by Belladonna.

By JAMES SEATON, Esq., L. R. C. S. E., L. A. C., Leeds.

(In September, 1858, "two young men having gathered about a pint of the ripe fruit of the atropa belladonna, which they found growing in an old quarry a few miles from Leeds, on their arrival home distributed them among their friends, believing them to be innocuous." A great number of the poisoning cases resulting from this imprudence came under the notice of Mr. Seaton—of which he relates ten, only one being fatal, and concludes by the following remarks:)

The first symptom appears to have been dryness of the mouth and throat; next, indistinctness of vision and dilated pupil; and, afterwards, in the more severe cases, delirium supervened. I found in one man, who had only swallowed one berry, the dry mouth and fauces without any affection of vision. The indistinctness of vision was the most persistent symptom; in all the cases it existed to a greater or less degree for several days, and the boy, C. C.'s vision continues defective up to the present time. The delirium was of a busy, restless, vivid character, but generally rather pleasing than otherwise. The patients appeared to think that they were pursuing their ordinary occupations; one boy appeared eager in flying a kite; another pulled chairs and tables about, thinking he was working in a coal pit; while the woman, E. W., appeared to be remarkably busy with her household duties. All their movements were of a quick, excited character, strikingly resembling delirium tremens. There was no very marked vascular excitement, the skin was, in most of the cases, moderately cool, and the pulse rapid, but without power.

The remarkable tolerance of opium in these cases would appear to bear out the conclusion at which Mr. Bell, Dr. Graves, and others have arrived: that opium and belladonna mutually counteract each other. In none of the cases in which delirium was present, were the symptoms alleviated until sleep was obtained; and, after sleep, the patients felt comparatively well. The pupils were widely dilated so long as the delirium continued, and when sleep was obtained, were either contracted or reduced to the natural size.

With regard to the fatal case, I may mention, that she was decidedly scrofulous, and had been under treatment for several months for disease of the bones of the face. It will be observed that she took much less opium

than several of the cases which recovered, and that, at the moment of death, the pupils were very widely dilated.

The post-mortem appearances are chiefly valuable for their negative testimony. The condition of the brain appeared to be as nearly as possible perfectly natural; as was the mucous membrane of the stomach and intestines. The only thing which was abnormal was the remarkable fluidity of the blood in every part of the body.—*Med. Times and Gazette.*

Strychnia in the Treatment of Dyspepsia.

By A. LEARED, M. B., M. R. I. A., Physician to the Great Northern Hospital.

From this work, which is well worthy the perusal of our readers, we extract the following on the efficacy of strychnia in the treatment of dyspepsia.

Strychnia acts not only as a bitter, but possesses other valuable properties in dyspepsia.

It need hardly be urged that this energetic drug requires to be cautiously administered, but its effects will amply repay the care. Speaking from extensive experience, I know no single medicine of more value in this disease. Strychnia is particularly indicated in dyspepsia attended with nervous debility. In that numerous class of cases in which abnormal sensations in various parts of the body—as the throat, the head, or the limbs—are experienced, it will generally be found useful. It is the best tonic for the class in which mental symptoms predominate. But it also possesses excellent local effects, and acts by increasing the tone of the muscular coats of the stomach and intestines. When these coats are relaxed, gases are generated, mainly owing to retardation of the aliment in the cavities. No remedy has in my hands proved so permanently effectual as strychnia against this inconvenience. In the case of a gentleman who suffered most severely from sudden and almost daily accumulation of gas in the stomach and bowels, these attacks were attended with great mental oppression; often by fits of crying. The symptoms, in fact, resembled those of hysteria very closely. I mention the case particularly on account of its severity, and because the patient was cured by strychnia; and some time has now elapsed without a return of the attacks.

Strychnia should always be given in solution for the sake of its more effective diffusion in the stomach, and for the sake of greater certainty in apportioning the dose. A proportion of some acid, as a dram of dilute acetic acid to a grain of strychnia, should be prescribed with it, as the action of strychnia is greatly favored by association with acids. The discrepant accounts given of it, in all probability depend on different degrees of acidity in the stomachs into which solid strychnia was introduced. As a bitter tonic, the fortieth part of a grain is a sufficient dose. When it is desired to in-

sure specific action, the twentieth part of a grain may be given; but it will seldom be necessary to exceed this, as the good effects of strychnia on the gastro-intestinal muscular fibres are usually secured by a quantity that does not affect the voluntary muscles. A solution of strychnia of definite strength that will keep, which that made with acid will not do so, is a desideratum in the forthcoming national pharmacopœia.

A preparation of citrate of iron and strychnia has lately been introduced, but it has no claim to be regarded as a chemical compound. It is simply a useful mixture; but the variable proportions adopted by the makers, within my own knowledge, ranging from one part of citrate of strychnia in ninety parts, to one part in one hundred and fifty, is highly objectionable.—*Braithwaite's Retrospect*.

Selections.

BISMUTH IN GLEET AND LEUCORRŒA.—M. Gaby, of Paris, says: Repeated trials have convinced me that injections of oxyde of bismuth constitute the very best treatment of gleet discharges. Thirty parts are suspended in two hundred of rose water, and so injected as to leave as large a deposit of the salt as possible in the canal. Three injections per day should be employed at first, and then fewer. He has collected forty-three cases thus treated with success, five of which he briefly relates. Urethral discharges, unconnected with gonorrhœa, as observed in certain diatheses, in masturbation, venereal excesses, etc., and increasing in quantity, even after pure connection, have been successfully treated by this means in three instances.

Balanitis and balanoposthitis, and herpes præputialis yield rapidly to bismuth, applied in powder, after cleansing the part, and then covering with cotton. The various forms of vulvar leucorrhœa may be treated with bismuth. (One of these is entirely confined to the vulva, whether appearing as a consequence of follicular vulvitis, or without previous inflammatory symptoms. The latter is often met with in little girls.) Pregnancy, want of cleanliness, masturbation, worms, or contusion, are among the exciting causes. After removing all complication, the bismuth acts upon the discharge like a specific.

In the leucorrhœa of girls, powdering with bismuth is an excellent remedy. In ordinary vaginal leucorrhœa, occurring in women otherwise healthy, and having no other disease of the genito-urinary organs, the bismuth succeeds well.

Urethra-vaginal leucorrhœa, is almost always of infectious origin. In several instances reported, it yielded to bismuth after obstinately resisting other remedies. It is to be remembered that all the cases in which bismuth is useful are of the chronic description, and that pain and other signs of acute inflammation, contra-indicate its employment.—*North American Medical Reporter*.

pious leucorrhœa. As it was possible that a larger experience of this remedy might enable us to convert some married women (within catamenial ages) into wet nurses, and as it undoubtedly acted as a powerful lactagogue in suckling women, he was anxious that others also should experiment, and therefore to direct them where it could be procured.—*Brit. Med. Jour.*

Pharmacy.

TO MAKE A BLISTER.

Steep cantharides in æth. sulph. for a fortnight, or until the cantharides float upon the surface; skim it off. One dram of cantharides, one dram of white wax, five drams of olive oil, melted together, mix. With a brush paint it over some white bibulous paper, and hang it up to dry in a current of air. Take a piece of pink paper, form and size required, and paint the uncolored side over with a weak solution of india rubber; cut your cantharides paper the form and size (less a margin) of the pink paper—while the India rubber solution is still sticky place it on; when dry roll it up. It is unaffected by damp, is light, portable, blisters with certainty, and without pain. The introduction of the caoutchouc varnish, arrests the perspiration of the part and increases doubly the certainty while diminishing the time required for application. Before applying, the blister should be held over the steam of hot water. The blister will be effectual for several times.—*Dublin Hosp. Gaz.*

QUINIO OR ROUGH QUININE.

By M. Batka.

A substance is known in the Brazils under the name of quinio, which is extracted from the fresh bark of the cinchona by lime, and then from the lime by alcohol. It is very rich in quinine, and it is only necessary to boil it with dilute sulphuric acid to obtain an abundant crystallization of pure sulphate of quinine. Quinio is a yellow body of a resinous appearance and of a bitter taste. It is insoluble in cold, and but slightly soluble in boiling water. It is very soluble in alcohol and ether, separating partially from the latter by exposure to the sun. Water precipitates the alcoholic solution. It is almost entirely soluble in weak sulphuric acid, from which soda precipitates it of a dirty white color, the precipitate assuming the appearance of a resin. A beautiful white sulphate, however, may be prepared from it. Quinio is free from cellulose; when heated it gives off an odor something like cinnamine; and burnt, leaves a light residue of carbonate of lime. It resembles a good deal the quiniiodine of Liebig, but is much purer than quiniiodine of commerce.—*Dublin Hospital Gazette.*

FORMULÆ FOR THE ADMINISTRATION OF PERCHLORIDE OF IRON.

By Dr. Deleau.

SYRUP.

Normal solution of perchloride of iron, 10 grammes.
 Syrup, 490 "
 Peroxide of iron, hydrated, q. s.

Each spoonful of this syrup contains twelve centigrammes of perchloride of iron.

PILLS.

Normal solution of perchloride of iron, 5 grammes.
 Powder, q. s.
 Hydrated peroxide of iron, q. s.

Make one hundred pills, containing each one, twenty-five milligrammes of perchloride of iron.

INJECTIONS.

Normal solution of perchloride of iron, 8 grammes.
 Water, 250 "
 Hydrated peroxide of iron, q. s.

The liquid must be agitated from time to time, to avoid the acidification of the solution.

POMATUM.

Normal solution of perchloride of iron, 8 to 24 grammes.
 Lard, 30 grammes.
 Oil of sweet almonds, q. s.
 Hydrated peroxide of iron, q. s.

SPARADRAP.

Concentrated solution of isinglass, 120 grammes.
 Normal solution of perchloride of iron, 30 "
 Hydrated peroxide of iron, q. s.

NORMAL SOLUTION OF PERCHLORIDE OF IRON.

Hydrochloric acid, q. s.
 Hydrated peroxide of iron, q. s.

Combine the peroxide of iron with hydrochloric acid; when the solution is complete boil a few minutes and filter; evaporate till the solution marks 24° when it is boiling, and 80° cold. This solution contains half of its weight of perchloride, and it is the one used for all preparations named above.—*Journal de Chimie Medicale.*

PROPYLAMIN IN RHEUMATISM.

By Dr. Awenarius.

Propylamin, 20 drops.
 Distilled water, 180 grammes.
 Add, if it is necessary,
 Oleosaccharate of peppermint, ... 8 grammes.
 Dose—One spoonfull every five hours.—*Jour. de Chimie Medicale.*

ON THE PREPARATIONS OF IODIDE OF MERCURY AND IRON.

By Mr. Ch. Chamouin.

SYRUP OF IODOHYDEARGYRATE OF IODIDE OF IRON.

Biniodide of mercury, 1 gramme.
 Syrup of protoiodide of iron, 8000 "
 Thirty grains of this syrup represents 0.01 of bi-iodide of mercury, combined with the same quantity of protoiodide of iron.

PILLS.

Solution of protoiodide of iron, 30 grammes.
 Biniodide of mercury, 1 "
 Reduce to the half; add ten grammes of honey; powder q. s., to make one hundred pills.—*Journal de Chimie Medicale.*

LIQUID WITH THE ARSENITE OF BROMIDE OF POTASSIUM.

By Mr. Ch. Clemens.

Arsenious acid, 4 grammes.
 Pure carbonate of potash, 4 "
 Dissolve in distilled water, 372 "
 Add, pure bromine, 8 "
 Shake several times the first week. After one month it is colorless, and good to be used. Dose—three or four drops in a tumbler of water, once or twice a day.—*Annales Medic. de la Flandre Occidentale.*

OIL WITH IODIDE OF AMMONIUM.

Iodide of ammonium, 15 centigrammes.
 Olive Oil, 30 grammes.
 Against the syphilitic pains.—*Jour. de Chimie Medicale.*

PILLS OF IODIDE OF AMMONIUM.

Iodide of ammonium, 1 gramme.
 Mucilage, 8 "
 Make twenty pills. Dose—One to three, in syphilis and scrofula.—*Journal de Chimie Medicale.*

POTION AGAINST DYSENTERY.

Hydrochloric acid, pure,.....	1 gramme.
Perchloride of iron, pure,.....	1 "
Water of orange flowers,.....	60 "
Syrup,.....	60 "
Thebaïque syrup,.....	80 "

A spoonful every two hours.—*Journal de Chimie Médicale.*

SNUFF AGAINST THE CHLORO-AMENIA.

Powder of ignatia beans,.....	0.06
Lactate of iron or powder of iron,.....	0.18
Rhubarb,.....	0.18 a 0.24
Oleosaccharate of peppermint,.....	0.86

Mix. Take two packages a day.—*Bulletin de Therapeutique.*

PROF. MULDER'S METHOD TO DETERMINE THE PERCENTAGE OF ALCOHOL IN WINES.

By B. Festner.

The description of this method, as given on page 131 of this volume, is susceptible of an important improvement and explanation.

There are two modes of obtaining the desired result, both of which I will shortly describe. Supposing a wine to possess at 50° Fahrenheit a specific gravity = 0.9953. A certain volume accurately measured, is evaporated in the waterbath, with the proper precautions against loss, until no more spirituous odor is perceptible, when the former bulk is again made up by the addition of distilled, or better, ice-water, and the specific gravity again taken when the liquid has the same temperature as before, i. e. 50° Fahrenheit, supposing it to be = 1.0080.

1. Since the loss of alcohol has raised the weight of the liquid by 0.0127, it follows that this quantity of alcohol had lowered the specific gravity of wine by 0.0127, and would have lowered that of pure water to 0.9873, which by referring to the alcoholometric tables, will be found to be that of a mixture of alcohol and water, containing 9.3 per cent. of the former.

2. We arrive at the same result more directly by considering first that, as the specific gravity of the liquid resulting from the evaporation, is 0.0080 higher than that of pure water, owing to the presence of extractive matter, it follows that the specific gravity of the original wine, if free from extractive, would be 0.9953 less 0.0080 = 0.9873, which is the specific gravity of a mixture of alcohol and water, containing 9.3 per cent. of the former.

This method requires very accurate hydrometers and thermometers to give correct results. A hundred-dram bottle and an accurate balance is preferable to the 1000 grains bottle, because a slight error in the weight would not affect the result in an equal measure.—*Druggists' Circular.*

SYRUP OF LACTUCARIUM. -

Fluid ext. of Eng. lactucarium,.....	1 fluid dram.
Sugar,.....	80 ounces, (offic.)
Water,.....	18 fluid ounces.
Distilled orange flower water,.....	2 " "

Triturate the fluid extract with a portion of the sugar, then dissolve this and the remainder of the sugar in the water by the aid of heat, strain, and when nearly cold add the orange flower water. If the fluid extract of German lactucarium is used, the proportion should be increased, probably about 25 per cent., although we have no evidence founded upon experiment as to the relative therapeutic value of the two commercial varieties.

We have not referred particularly to the process of M. Gustin, in which water acidulated with nitric acid is the menstruum, as we cannot conceive of this furnishing a fair representative of lactucarium, nor to the formula of our colleague, T. S. Wiegand, in which the use of carbonate of potassa is directed; this is particularly adapted to English lactucarium, and furnishes a strong preparation but not an elegant one, a characteristic which is fatal to its general adoption.—*Amer. Jour. Pharmacy.*

DENTAL NEURALGIA.

M. Balloy prescribes for this:—

Acetate of morphia,.....	gr. issa.
Acetic acid,.....	gr. ij.
Eau de Cologne,.....	3 ij.

To be dropped on cotton or wool and placed in the ear on the painful side.

Editorial.

AMERICAN PHARMACEUTICAL ASSOCIATION.—The eighth annual meeting of the American Pharmaceutical Association, will take place in the city of New York, on Tuesday, the 11th day of September next, at 3 o'clock, P. M.

The objects of the Association and the conditions of membership are explained in the following extracts from the Constitution:—

ARTICLE I.

This Association shall be called the American Pharmaceutical Association. Its aims shall be to unite the educated and reputable Pharmacutists and Druggists of the United States in the following objects:—

- 1st. To improve and regulate the drug market, by preventing the importation of inferior, adulterated or deteriorated drugs, and by detecting and exposing home adulteration.
- 2d. To establish the relations between druggists, pharmacutists, physicians, and the people at large upon just principles, which shall promote the public welfare and tend to mutual strength and advantage.
- 3d. To improve the science and the art of pharmacy by diffusing scientific knowledge among apothecaries and druggists, fostering pharmaceutical literature, developing talent, stimulating discovery and invention, and encouraging home production and manufacture in the several departments of the drug business.

4th. To regulate the system of apprenticeship and the employment so as to prevent, as far as practicable, the evils flowing from deficient training in the responsible duties of preparing, dispensing, and selling medicines.

6th. To suppress empiricism, and as much as possible to restrict the dispensing and sale of medicines to regularly educated druggists and apothecaries.

ARTICLE II.—OF THE MEMBERS.

Section 1. Every pharmacist or druggist of good moral and professional standing, whether in business on his own account, retired from business or employed by another, who, after duly considering the objects of the Association and the obligations of this Constitution, is willing to subscribe to them, is eligible to membership.

Section 2. The mode of admission to membership shall be as follows: Any person eligible to membership may apply to any members of the executive committee, who shall report his application to the said committee. If after investigating his claims they shall approve his election, they shall at the earliest time practicable, report his name to the association, and he may be elected by two-thirds of the members present, on ballot. Should an application occur in the recess, the members of the committee may give their approval in writing, which, if unanimous, and endorsed by the president, shall constitute him a member, and the fact be reported to the association at the next succeeding meeting.

Section 3. No person shall become a member of this association until he shall have signed the Constitution, and paid his annual contribution for the current year. All persons who become members shall be considered as permanent members, but may be expelled for improper conduct by a vote of two-thirds of the members present at any annual meeting.

Section 4. Every member shall pay into the hands of the treasurer the sum of two dollars at his yearly contribution, and is liable to lose his right of membership by neglecting to pay said contribution for three successive years. Members shall be entitled, on the payment of three dollars, to receive a certificate of membership, signed by the president, vice-president, and secretary, covenanting to return the same to the proper officer on relinquishing their connection with the association.

Section 5. Every local Pharmaceutical Association shall be entitled to five delegates in the annual meetings, who, if present, become members of the association on signing the Constitution, without being ballotted for.

Pharmacutists and Druggists desirous of membership, can make application to any of the officers, or obtain any information from them respecting the association. Applications for membership should be in the hands of the executive committee at the opening of the first session. Reports of committees, and papers presented for publication, should be written only on one side of the paper, and corrected for the printer. All interested in the objects of the association are invited to co-operate.

SAMUEL M. COLCORD, *President*

MASONIC REVIEW—Cincinnati, contains much interesting matter, particularly devoted to a consideration of the usefulness of that institution. This is an old and established magazine, and should be sought by those associated with that fraternity. Published monthly, by C. Moore, 171 Walnut Street, Cincinnati.

EPILEPSY.—We have received from Prof. D. L. McGugin a treatise, embracing the history, pathology, and treatment of epilepsy, which will soon be issued in pamphlet form. Dr. McGugin's long experience in the treatment of this disease, entitles his suggestion to the consideration of those who have cases of this kind under treatment.

RANKIN'S HALF-YEARLY ABSTRACT OF MEDICAL SCIENCES—The number for July is replete with valuable and interesting matter. It contains 275 pages—price \$1.00 per number; being a practical and analytical digest of the contents of foreign and American journals. It gives to the profession a larger amount of information than can be obtained in any other way for the same cost.

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Indigenous Tonics.

BY CHARLES A. LEE, M. D.

NUMBER X.

WE have now considered some of the most important indigenous tonics, and pointed out their special uses and best modes of administration; the list is numerous enough, perhaps, for all practical purposes, and yet, in accordance with the plan laid down in our programme, it is proper to briefly consider a number of other articles belonging to the same class: though our knowledge of their peculiar effects is comparatively limited.

MENISPERNUM CANADENSE.

The natural order, *menispermaceæ*, includes eleven genera, two thousand one hundred and seventy-five species, most of them natives of tropical Asia and America; but it embraces only one northern genus, viz., the *menispermum*. The Canadian moon-seed or yellow parilla, is a climbing plant, growing in various parts of the United States, from Canada to the Gulf of Mexico, on the banks of streams; leaves peltate, drupes black with a bloom, ripening in September, and looking like frost-grapes.

The root, which is the part employed, is of a yellowish color,

and a strong bitter taste. It contains a peculiar bitter principle, *menispermin*, which is soluble in water; also, a resin soluble in alcohol, together with gum, starch, sugar, &c.

✓ This plant has been found to be one of our best and most reliable indigenous tonics, being employed most extensively in the middle States, both in domestic and regular practice, in the cure of scrofula and other cachectic affections. As a gently stimulating tonic alterative, it has been found well adapted to chronic cutaneous, and other diseases dependent on a vitiated and deteriorated state of the blood; and as it possesses diuretic and laxative properties, it has been used successfully in cases of hepatic torpor, with constipation. As an alterative depurant, tonic, it deserves to occupy a high rank, promoting all the excreting functions, and favoring the metamorphosis of the tissues; while, at the same time, it increases the tone of the digestive organs, and the assimilating function. We would recommend the trial of this remedy in scrofulous and anemic conditions, in combination with iron; also, in chlorosis and chronic disorders of the genito-urinary system, as cystitis, phosphatic deposits, &c.

The only preparation of this plant which we have found in the shops, is the *menispermin*, prepared at the laboratory of B. Keith & Co., New York. It seems to be the powdered resinoid and alkaloid, or bitter principle, mixed, perhaps, with some other substance. It is a pure, and not unpleasant bitter to the taste, without acidity, and of a deep brown color. The dose is from two to five grains three times a day; the larger quantity if a laxative effect be required. We believe it to be a useful and reliable preparation. It may be given in form of pill, combined with iron, by hydrogen. The botanists combine it with stillingin, senecín, helonin, &c.

SCUTELLARIA LATERIFLORA.

(*Blue Scullec—Mad Dog Weed, &c.*) Natural Order, *Labiata*; Linnean System, *Didynamia Gymnospermia*.

This well-known, indigenous, perennial herb has an erect, branched, quadrangular, smooth stem, one or two feet high, with ovate leaves, and small, pale blue flowers. It grows in moist places, by the sides of ditches and ponds all over the Union. It has no very sensible properties in its green state, either as to taste

or smell, hence generally supposed to be inert. Most, if not all the other labiate plants have aromatic properties; dependent on an aromatic oil.

This plant has enjoyed a wide spread reputation as a preventive of hydrophobia, in cases of mad-dog bites, but has now gone out of use as a prophylactic against canine madness. Recently it has come into considerable repute as a valuable nervine, with tonic properties, acting also as a diaphoretic and diuretic. From what experience we have had in the use of this plant, we have formed a very favorable opinion of its virtues as an antispasmodic, quieting the nervous system, and at the same time promoting the appetite and giving tone to the system generally. We have known it to prove useful in nervous irritability, dependent on debility; also, in hysteria and painful menstruation. It is said to have been used successfully in chorea, and some forms of convulsion. It has been recommended in neuralgia and tic douloureux; also, in fevers, to abate delirium and cerebral excitement, as well as to act as a febrifuge, but it is very doubtful whether it is well suited to such cases. In the stage of convalescence it would probably prove beneficial. The *fluid extract* of scutellaria is now kept in the shops, of Tilden's manufacture, and will be found to contain all the virtues of the plant. Dose, from half to one dram. The *compound fluid extract* is composed of *scullcap*, *ladies' slipper*, *hop* and *lettuce*, and is a very efficient nervine and tonic, in the same doses. We have, also, *scutellarin*, from the laboratory of the Tilden's and Keith & Co. The first is a dark colored powder, resembling Scotch snuff, of a mildly pleasant bitter taste, and is given in doses of from two to six grains. The latter is of a lightish yellow color, resembling the resinoid, *hydrastin*, and like that of a very bitter, saline taste. If this is the "resin, resinoid and neutral" principle of the scullcap, and nothing else, then no one can deny that the plant has very strongly marked sensible properties. These preparations have nearly displaced the *infusion*, which is made with an ounce of the dried plant, or the fluid extract to one pint of water. Dose, a wine glassful three times a day.*

* There are nine other species of scutellaria, some of which possess very strongly marked tonic properties, and are intensely bitter, as the *S. integrifolia*.

POPULUS TREMULOIDES.

American Poplar—White Poplar—Upland Poplar. THE BARK.

The American poplar or aspen, belonging to the natural order Salicaceæ, or willow family; sexual system Dioceia Octandria, is closely allied in botanical habit and medicinal properties to the different species of salix already described. The genus includes six indigenous species, among which are the famous cotton wood, of the west, and the balsam poplar, or tacamahac, whose large buds are varnished with a fragrant resinous matter. The Balm of Gilead (*P. candicans*,) is a variety of the latter.

The bark and leaves of the American poplar contain a peculiar bitter alkaloid, *populin*; also, *salacin*, together with starch, gum, resin, and a *peculiar volatile oil*. The two latter are most abundant in the buds. The *populin* is very light, purely white, and of a bitter sweetish taste, somewhat like that of liquorice. When heated it melts into a colorless and transparent liquid. It is soluble in two thousand parts of cold and seventy parts of boiling water; and is more soluble in boiling alcohol. Acetic acid and the diluted mineral acids dissolve it, and upon the addition of an alkali let it fall unchanged. The resin is sometimes erroneously called *tacamahac*. The *salacin* is obtained in the manner already pointed out under salix.

The therapeutical properties of the *populin* are supposed to be nearly, if not quite identical with those of the willow. As an antiperiodic, it has been used successfully in the treatment of intermittents; and also as an ordinary tonic, where such remedies are indicated. We have good reason for believing that its tonic properties are considerably superior to those of the salix, especially its antiperiodic power, and that there are few indigenous tonics superior to it in a certain class of cases, especially intermittents. As a stomachic tonic, the tincture has been extensively used in domestic practice, and with satisfactory effects; also, as a vermifuge. It is thought by many to possess decided alterative properties, and those who have watched its effects closely, consider it diuretic, diaphoretic and a general depurant. It has been strongly recommended in jaundice, and in suppression and retention of urine, but further trials are needed before its efficacy in these affections can be admitted. It meets all the indications of the simple bitters.

The populus has generally been used in the form of infusion, powder, tincture, *populin*, of the *P. balsamifera*, and the oil. The *populin* of Messrs. Tilden's, Keith & Co., and other manufacturers, is now kept in the shops, and possesses many advantages over the other forms, especially as an antiperiodic. The dose is from four to eight grains. The volatile oil which is also in market, obtained from the buds of the *P. balsamifera*, has much the appearance of balsam Peru, and resembles turpentine in taste and medicinal properties. It is used with advantage in pectoral, nephritic and rheumatic complaints, in substance or tincture; and a liniment, made by incorporating it with sweet oil or lard has been found useful as an external application in rheumatism, &c.

The *unguentum populeum*, (*Lond. Pharm.*) for painful local affections as tumors, wounds and burns, is made by bruising in a mortar, and then boiling in lard the fresh leaves of black poppy, belladonna, hyoscyamus, and the solanum nigrum, then adding the buds of the poplar, digesting for twenty-four hours, and straining with strong expression. The buds are also employed as the basis of a balsam and tincture, used for colic, headache, &c. The resinous decoction of the buds of the *P. balsamifera* is collected in shells in Canada, and exported in considerable quantities to Europe, where it is in much repute as a diuretic and antiscorbutic. There is scarcely any doubt but that this substance will yet be found to be a useful substitute for the balsam of copaiba and the liquid turpentine.

Further experiments, also, with *populin* in intermittents are desirable; we believe it will prove successful in a majority of cases, equal if not superior to salacine, and can be manufactured much cheaper.

XANTHOXYLUM FRAXINEUM, (*Prickly Ash.*)

(*Natural Order*, Xanthoxylaceæ; *Lindley, Gray*;) *Sexual System*, Dioecia, Pentandria. THE BARK.

There are two species belonging to this well-known genus, indigenous to the United States, viz., *X. Americanum*, (Gray) and *X. Carolinianum*, or northern and southern prickly ash. The northern species is a shrub, from five to ten feet high, with alternate branches, which are covered with strong, sharp, scattered prickles. The plant is polygamous, some shrubs bearing both

male and perfect flowers, others only female; it grows in moist and shady places, flowering in April and May, before the foliage appears.

Properties.—The bark is the officinal portion, though every part of the plant is endowed with the aromatic and active principles, the odor resembling that of the oil of lemons. The bark, as found in the shops, is in pieces more or less quilled, of a whitish color, internally somewhat shining with an ash-colored epidermis; very brittle, light, nearly or quite inodorous, and of taste, at first sweetish and slightly aromatic, then bitterish, and ultimately very permanently acrid. This acidity is imparted to boiling water and alcohol, which extract all the virtues of the bark.

Its active constituents are *volatile oil*, a *greenish fixed oil*, *resin*, *gum*, *coloring matter*, and a peculiar crystallizable principle, *xanthoxylin*. This is a neutral substance, whose properties have not been fully investigated. The leaves and fruit abound in volatile oil. Bigelow states the rind of the capsule is highly fragrant, imparting to the fingers, when rubbed between them, an odor much like the oil of lemons. The odorous portion is an essential oil residing in transparent vesicular points on the surface of the capsule, and about the margins of the leaves. The acrimony which resides in the bark, has its foundation in a different principle, being separated by decoction but not by distillation.

Medical Properties.—The prickly ash is a very valuable stimulating, alterative tonic and has been very justly compared to the mezereum in its physical and therapeutical properties. Though extensively used in domestic practice in chronic rheumatism, &c., it has not been as much employed in regular practice as it deserves; for it is unquestionably one of our most actively medicinal plants, as its sensible properties very plainly indicate. As a powerful and permanent stimulant in languid, torpid conditions, especially in patients of a lymphatic, phlegmatic temperament it deserves high eulogium; proving equal, if not even superior to guaiacum and mezereum. When first swallowed it causes a sensation of heat in the stomach, followed by general arterial excitement, and a tendency to diaphoresis. Sometimes a pricking sensation is experienced throughout the body extending to the

limbs, very similar to that caused by strychnia. It seems to rouse the organic nervous agency in a marked degree, and in consequence promotes the circulation throughout the whole capillary system, and this effect is not transient like that produced by the more diffusible stimulants, as alcohol and camphor. It is unnecessary to go into detail in regard to its application in different diseases; we have referred to chronic rheumatism as one affection, which, when chronic, has been often successfully treated by this plant. Dr. Bigelow states that he gave the bark of this shrub in doses of ten and twenty grains in this disease with considerable advantage, and that in one case it effectually removed the complaint in a day. Eberle, also, testifies strongly in its favor.

From facts which have come within our knowledge, we have no hesitation in saying that the prickly ash is a highly valuable medicine in secondary and tertiary syphilis; as an alterant, perhaps, more efficient and reliable than sarsaparilla, or most of the other vegetable alteratives usually prescribed in this disease. It is a powerful eliminant, exciting the whole secretory, excretory, glandular system, favoring metamorphic changes in the tissues, and acting as a general depurant. Syphilitic sores and malignant ulcers speedily assume a more healthy aspect under its internal and external use. In conjunction with alkalies, it is also a useful article in chronic cutaneous diseases and atonic gout; salivation sometimes follows its long continued use. In domestic practice this article is frequently employed, and often with prompt success, in the relief of flatulence and colic; also, as a useful emmenagogue, in the form of a warm decoction taken at bed time. In such cases we have found it more certain than rue, pennyroyal, or any other articles of the class. The peculiar principle, xanthoxylin, is very similar to piperine both in its physical and sensible properties, and its action as an antiperiodic. The xanthoxylum is regarded by some practitioners, and we believe by all who have made much use of it, as a very certain and valuable chologogue, exciting the action of the hepatic cells; doubtless, by promoting the capillary circulation in the organ, as it does in every other part.

Another important use of this plant is, in congestion of mucous surfaces, whether of the throat and fauces, vagina, urethra, or any other part. Here, from relaxation and want of tonicity,

the coats of the vessels yield and become distended with blood. The indication is, to restore the healthy tone of the vessels. This is accomplished in many cases, at least, by the use of this article. Further observation is needed on this point, but enough is ascertained, to justify a more frequent resort to it in such cases. In low forms of fever the *xanthoxylum* has also been found a very important and valuable stimulant tonic. From its known physiological action, it would seem to be well suited to paralytic affections of a chronic nature, and to torpid conditions of the digestive and assimilating functions. We have heard, also, of its beneficial use in scrofulous diseases. It excites salivation, whether taken internally or applied locally.

Preparations.—Powder, infusion, decoction, fluid extract, *xanthoxyl*in, tincture, oil.

The *powder* may be given in doses of from five to twenty grains, but it is not an eligible form for ordinary use, being open to the same objections as the powders of other vegetable substances.

The *infusion* is sometimes used, in the proportion of one ounce of the bark to one quart of boiling water; infuse in a covered vessel one hour and strain. Dose, from one to four ounces every four hours.

The *decoction* is prepared by boiling an ounce in three pints of water down to a quart; of which, a pint may be given, in divided doses during the twenty-four hours.

The *fluid extract* is one of the best forms for ordinary use. Dose, from fifteen to forty drops, in a tablespoonful of sweetened water.

The *xanthoxyl*in of Tilden's manufacture, is the active principles obtained by hydro-alcohol in vacuo, and afterwards combined with sugar of milk. Dose, from two to six grains. This is well suited to the pilular form, each containing one grain. On account of the acrid taste, this form is often preferred.

The *tincture* is now replaced for the most part by the fluid extract. Dose, (concentrated) from five to ten drops.

The *oil of xanthoxylum* is prepared by B. Keith & Co., and is said to be a useful and reliable preparation. Dose, from two to five drops.

MAGNOLIA GLAUCA.

(*Magnolia*—*Small Magnolia*—*Sweet Magnolia*—*White Bay*—*Beaver Tree*—*Swamp Sassafras*—*Swamp Laurel*, &c.) *Natural Order*, Magnoliaceæ; *Linnean System*, Polyandria Polyginia.

The magnolia is universally recognized as one of the most admirable productions of the vegetable world. Certainly, among the numerous trees indigenous to our country, none are more conspicuous for the beauty of their foliage or the magnificence and delightful odor of their flowers. Six species belonging to this genus are found within the limits of the United States, all of which are highly ornamental, and all possess similar medicinal properties. Three of these are recognized by the U. S. pharmacopœia, viz., the *M. glauca*, *M. acuminata*, and *M. tripetala*, but the *M. auriculata*, *M. macrophylla*, and *M. grandiflora*, are equally deserving of notice. It is a somewhat remarkable fact, that no tree of this genus has hitherto been found indigenous to Europe, Africa, South America, nor Australia, and the geographical range of the order magnoliaceæ in America and Asia is comparatively limited. For a botanical description of the three species above named, we would refer the reader to the U. S. Dispensatory, of Wood & Bache.

We may remark, however, that the *M. glauca* extends along the sea-board of the United States, from Cape Ann, in Massachusetts, to the shores of the Gulf of Mexico; being abundant in the middle and southern States, and but seldom met with in the interior of the country west of the mountains. The *M. acuminata*, (*cucumber tree*) is found in the mountainous regions in the interior of the United States, extending along the Alleghanies from the State of New York to their termination in Georgia, being seldom found in the low country far either to the east or west of this range. The *M. tripetala*, (*umbrella tree*) extends from the northern parts of New York to the southern limits of the United States; being only found in situations which are shady, with a strong, deep and fertile soil.

The bark is the part used in medicine, that of the root being generally preferred, although that of the trunk and branches is said to be equally powerful. It has an aromatic odor, and a bitter, pungent, spicy taste. The source of the aromatic property is

a volatile oil, which is diminished by desiccation, and entirely lost by age, or keeping any considerable time. The bitterness, however, remains. The fragrance of the flowers is highly agreeable to most persons, while to others it is not only unpleasant, but absolutely deleterious, causing faintness and impeded respiration.

No analysis has as yet been made of the bark of any species of the magnolia, except the *grandiflora*, which was found by Dr. Procter to yield a gum resin, a volatile oil, and a peculiar crystallizable principle, analogous to *liriodendrin*, (*Am. Jour. Pharm.* viii., 89.) There is little doubt that the bark of the other species, would yield the same constituents, as the sensible properties are similar. In regard to the medical uses of magnolia, it may well be ranked among our most useful indigenous tonics. The aborigines employed it extensively against rheumatism and autumnal intermittents, using the warm decoction as a sudorific and laxative, and the cold infusion as an antiperiodic. Perhaps there is no indigenous article on which greater reliance is placed, in many parts of our country, in the treatment of intermittents, as well as remittents having a typhoid character, than the magnolia, it being not only widely used in domestic, but also in regular practice. As a stimulating tonic and diaphoretic, it closely resembles the *liriodendron*, as they are, also, closely connected in botanical habit, and belong to the same natural order. Of the two, however, the magnolia is most grateful to the stomach, and probably, equally, if not more efficient. This applies, of course, only to those preparations in which the volatile oil is contained. The tincture of the cones and seeds is a popular remedy at the south in the treatment of chronic rheumatism, as well as a prophylactic against intermittent fever, and is doubtless applicable to most cases where the tonic indication is present. It forms an excellent substitute for the *casarilla* and *canella*, combining, as it does, similar aromatic stimulant and tonic properties. Porcher states that the leaves, infused in brandy, or a decoction of them are valuable in pectoral affections, recent colds, &c. That it is suited to cases of inflammatory gout, as claimed by Barton, may well admit of doubt, but that it might prove beneficial in chronic cases is very probable. The seeds of the *M. grandiflora* are said to be employed with success in paralysis, and in Mexico this is a very common remedy, and one in which much reliance is placed.

It is a prevalent notion in the southern States that the magnolia prevents the water of bogs and marshes from generating malaria ; a property which is also attributed by Dr. Cartwright, of Natchez, to the *jussiaea grandiflora*, which he remarks " purifies all stagnant water in which it grows—that of the lakes and bayous inhabited by it being as pure to the sight, taste and smell, as if it had just fallen from the clouds." This statement, however, needs confirmation.

The preparations of the magnolia are the powder, infusion, tincture, fluid extract, and magnolin. The dose of the recently dried bark in powder, is from half a dram to one dram, frequently repeated. The infusion, made by one pint of boiling water to one ounce of the coarsely bruised bark, in a covered vessel, may be given in the dose of two to four ounces, repeated according to circumstances. The tincture is made by macerating the fresh bark or cones in brandy. Dose, one to three drams. The fluid extract, not yet in market, would be the most eligible form, and may be given in the same doses as the tincture. As an anti-periodic in intermittents, this well deserves a trial. The magnolin, the neutral bitter principle, is not yet manufactured in quantity sufficient to be introduced into medicine. It will, doubtless, hereafter rank among our most important therapeutical agents.

Hypophosphites.

[CONCLUDED.]

Hypophosphorous acid.—So far as I am aware, this acid has not been prescribed in a free state, but it is highly probable that it may come into use. Any claims which phosphoric acid may possess as an agent to supply the waste of phosphorus and phosphates in the human economy, will be more than equalled by this acid. Hypophosphite of baryta is the salt which is most eligible for the preparation of this acid, but it is convenient to prepare it from the lime salt, viz:—

Take of Hypophosphite of lime,	- -	480 grains.
Crystallized oxalic acid.	- -	350 "
Distilled water,	- - -	9 fluid oz.

Dissolve the hypophosphite of lime in six ounces of the water and the acid in the remainder, with the aid of heat; mix the solutions, pour the mixture on a white paper filter, and when the liquid has passed, add distilled water carefully, till it measures ten fluid ounces, and evaporate this to eight and a half fluid ounces.

The solution thus prepared contains about ten per cent. of ter-hydrated hypophosphorous acid ($\text{HO} + 2\text{HO}, \text{PO}$), a teaspoonful representing six grains of the acid, which contains two and a quarter grains of phosphorus. The dose of this acid solution will probably vary from ten minims to a teaspoonful.

Hypophosphite of Manganese.—A preparation containing this salt having been prescribed, it is appropriate to mention it in this place, though, as it is not sold in a separate state, it need not be separately treated of in this place, (See *Syrup of Hypophosphite of Manganese.*)

Hypophosphite of Quinia.—This elegant salt introduced to notice by Prof. J. Lawrence Smith, of Louisville, Ky., is made with facility by dissolving one ounce sulphate of quinia in water, by the aid of diluted sulphuric acid, then precipitating the alkaloid with ammonia, washing, digesting in hypophosphorous acid with heat; the quinia in excess, after filtering, it evaporates spontaneously till it crystallizes. It may also be made by double decomposition between hypophosphite of baryta and sulphate of quinia. It is in elegant tufts of feathery crystals, soft to the touch, soluble in 60 parts of water, and more so in hot water. It loses water at 300° , melts and turns brown. Dose, one to five grains.

Eligible Combinations of the Hypophosphites.—The following preparations have all been suggested within a recent period as eligible combinations for administering these remedies. I also insert my own recipes, which have not before appeared in print.

Procter's Syrup of Hypophosphite of Lime.

Take of Hypophosphite of lime,	-	-	1 ounce.
Water,	-	-	9 1-2 fluid ounces.
White Sugar,	-	-	12 ounces.
Fluid extract of vanilla,	-	-	1-2 fluid ounce.

Dissolve the salt in the water, filter, add the sugar, dissolve by aid of heat, and add the vanilla. The dose is from a teaspoonful (three and a half grains) to a tablespoonful, (fourteen grains) according to the circumstances of the case, three times a day.

Procter's Compound Syrup of Hypophosphites.

Take of Hypophosphite of lime, - - - -	256 grains.
Hypophosphite of soda, - - - -	192 "
Hypophosphite of potassa, - - - -	128 "
Hypophosphite of iron,* (recently precipitated)	96 "
Hypophosphorous acid solution, - - q. s. or	240 "
White Sugar, - - - -	9 ounces.
Extract of Vanilla, - - - -	1-2 ounce.
Water, - - - -	q. s.

Dissolve the salts of lime, soda, and potassa in six ounces of water; put the iron salt in a mortar, and gradually add solution of hypophosphorous acid till it is dissolved; to this add the solution of the other salts, after it has been rendered slightly acidulous with the same acid, and then, water, till the whole measures twelve fluid ounces. Dissolve in this the sugar, with heat, and flavor with the vanilla.

Without flavoring, this syrup is not unpleasant.

Wm. S. Thompson's Syrup of Hypophosphites. (Containing the Protosalt of Iron.)

Take of Hypophosphite of lime, - - - -	256 grains.
Hypophosphite of soda, - - - -	192 "
Hypophosphite of potassa, - - - -	128 "
Protosulphate of iron, crystallized, - -	185 "
Carbonate of soda, - - - -	240 "
Hypophosphorous acid, sp. gr. 1.086, -	8 1-2 fl. ounces.
Sugar, - - - -	12 ounces.

Dissolve the protosulphate of iron and carbonate of soda, each separately, in four fluid ounces of water, and mix the solutions. Wash the precipitated carbonate of iron thoroughly with sweetened water, and drain it on a muslin filter. Having placed the salts of lime, soda, and potassa in a suitable porcelain dish, add about two fluid ounces of water, and one fluid ounce of hypophosphorous acid; heat the mixture gently, and add the moist carbonate of iron, in small portions, from time to time, alternately with the hypophosphorous acid, until the solution is complete. Add water enough to make the whole measure ten fluid ounces; pour it into a bottle containing the sugar, and agitate as before.—*Jour. and Trans. of Maryland College of Pharmacy*, June, 1858.

Parrish's Syrup of the Hypophosphites.

The presence of preparations of iron in these compounds was not called for by the original discoverer of their therapeutic value,

* This quantity, 96 grains, of hypophosphite of iron is obtained when 128 grains of hypophosphite of soda, dissolved in two ounces of water, is decomposed with a slight excess of solution of persulphate of iron, and the white precipitate well washed on a filter with water.

who considers the alkaline and earthy hypophosphites as superior to any of the ordinary "*hæmatogens*," and in practice, I believe the following very simple preparations have been found fully equal to those in which, *iron* is introduced with an excess of hypophosphorous acid.

Take of Hypophosphite of lime,	- - - - -	$\frac{3}{4}$ iss.
" soda,	- - - - -	$\frac{3}{4}$ ss.
" potassa,	- - - - -	$\frac{3}{4}$ ss.
Sugar, (com.)	- - - - -	\mathfrak{h} j, 12 oz.
Hot water,	- - - - -	Oj f $\frac{3}{4}$ iv.
Orange-flower water,	- - - - -	f $\frac{3}{4}$ j.

Make a solution of the mixed salts in the hot water, filter through paper, dissolve the sugar in the solution by the aid of heat; strain and add the orange-flower water. Dose, a teaspoonful, containing, nearly five grains of the mixed salts.

The *glycerole of hypophosphites* has the same composition as the foregoing, except that the solution is formed with a less proportion of water, to which a smaller portion of sugar is added, and the quantity made up with glycerin. We modify the flavor, also, by the use of a little oil of bitter almonds, to distinguish it from the corresponding syrup.

Some pharmacutists omit the sugar altogether, and propose this course in making all glyceroles, using glycerin as the solvent, as well as for its nutritive and remedial properties. I do not find this to furnish a pleasant preparation to take, as the saline ingredients have, perhaps, as strong a taste in this form as in an aqueous solution, and in view of the acridity of glycerin as usually met with, I think a teaspoonful a pretty large dose, unless diluted more than is usual with such preparations as glycerole of the hypophosphites. The proportion of glycerin will be regulated also by the price to be charged for the preparation, which, to adapt it to common use, must be placed at some approximation to the usual price of medicines.

The cheaper kinds of glycerin must be avoided in this preparation, as from contact with the salts or other causes they are apt to acquire very offensive properties.

It remains to notice one or two preparations, which have been occasionally ordered, and of which no published formulæ as yet exist.

Syrup of Hypophosphite of Iron.

Take of Protosulphate of Iron,	- - - -	185 grains.
Carbonate of Soda,	- - - -	240 "
Hypophosphorous acid, (sp. gr. 1.086)		f 3 ijss or q. s.
Water,	- - - -	
Sugar,	- - - -	12 ounces.

Dissolve the sulphate of iron and carbonate of soda, each separately, in four fluid ounces of water, and mix the solution. Wash the precipitated carbonate of iron thoroughly with sweetened water, and drain it on a muslin filter; then transfer to a dish, add a small portion of water, heat gently, adding hypophosphorous acid till it forms a clear solution; then add water till it reaches eight fluid ounces, and add the sugar and flavor to taste. This contains very nearly one grain of hypophosphite of protoxide of iron to the ounce.

The following has also been occasionally supplied for physicians prescriptions.

Syrup of Hypophosphite of Manganese.

Take of Sulphate of manganese,	- - - -	240 grains.
Hypophosphite of lime,	- - - -	160 "
Water	- - - -	Oj.
Sugar,	- - - -	℥ ij.
Orange-flower water.	- - - -	f 3 ss.

Dissolve the hypophosphite and sulphate in separate portions of water and mix; then wash the precipitate, evaporate to one pint, dissolve in this the sugar by the aid of heat, and add the orange-flower water. Dose, a tablespoonful, containing $2\frac{1}{2}$ grains of hypophosphite of manganese.

The *medical properties* of the preparations dwelt upon in this chapter, of course, interest the physician more than the pharmacist. They have, however, become the subject of much general remark and discussion, and I have had abundant opportunities of learning the estimate put upon them by physicians and their patients.

The phosphates of lime and iron have long been known and occasionally used. The former, according to Dr. Pareira, "increases incontestably the presence of calcareous salts in the bones, the blood, and the urine," and is hence useful in rickets; and the latter, in addition to the well-known general effects of the ferruginous salts, has enjoyed a high reputation in Europe as an alterative, both internally and externally used.

The chief practical difficulty about the use of these preparations has been their insolubility, and their present popularity is undoubtedly due to their being scientifically combined with the alkaline phosphates, in such proportion as the study of the healthy secretions, and the normal composition of the tissues indicates, and, above all, their being in perfect solution in an eligible form, commending itself to the taste of the patient. The capability of assimilation of medicinal substances has long been known to depend greatly upon their state of division, and no degree of comminution of a solid substance seems so favorable to this object as perfect solution. That the so-called chemical food is a useful and elegant tonic, meeting a want constantly experienced by practitioners in treating chronic cases, is attested by thousands who have used it.

The value of the salts of hypophosphorous acid has been much more zealously called in question, but can no more admit of a doubt; the extraordinary claim set up by Dr. Churchill, of a specific property possessed by these salts of curing consumption, even after it has progressed beyond its incipient stage, is certainly not established by general experience, but there is a cloud of witnesses to the utility and singular efficiency of these remedies in the treatment of many cases of nervous and general debility and ill health.

This is not the place to dwell upon this subject, but the remarks here made may serve as answers to the numerous inquiries addressed to me by physicians, though they must be taken as the opinion of a pharmacist, whose position and pursuits do not qualify him to pronounce upon a purely therapeutical question.

Epilepsy.

EMBRACING ITS HISTORY, PATHOLOGY AND TREATMENT.

By D. L. MCGUGIN, A. M., M. D.

THE term here used, and which has been applied to the designation of a peculiar set of phenomena was derived from a Greek word, which being translated is rendered "I seize upon," and is expressive because of the suddenness and violence of the seizure.

The term, therefore, in familiar use is not expressive of the pathological condition which results in the production of the epileptic paroxysm, but rather conveys an idea of the manner, and the overwhelming character of it.

The occurrence is unexpected, and the manner of the individual so startling and frightful that the ancients were at a loss to attribute it to any other agency than the evil spirits, and that it was sent upon the person so afflicted as a punishment for some great crime or offence against the laws of their mythological deities.

Hippocrates, therefore, imbued with this error, regarded it as a sacred disease, because of the source of the affliction and the purposes and objects of the punishment. Nor was he alone in this superstitious belief, for Celsus, Arctus and Pliny fell into the same delusion, and each named the disease after the source whence it emanated, or the God who had been particularly offended, and had visited the punishment upon the supposed offender. Paracelsus, too, followed suit and was governed by the senseless dogmas of the time.

It would be of little avail to give all the synonyms which have been in use, nor would it be particularly profitable further to trace its literature.

In order to a just and satisfactory investigation of the disease, and that nothing be omitted which shall be necessary to a proper conception of its nature, I shall pursue the analytic method, because better calculated to answer the purposes and objects of this enquiry. In adopting this course, the description will not be wholly overlooked.

Premonitions.—Those subject to attacks of epilepsy may be, and very often are, forewarned by certain symptoms, physical and mental, of an approaching seizure before there is an entire loss of consciousness. Sometimes just before the convulsive attack there is a perversion of the special senses, as of smell, by false and disagreeable odors, by a ringing sound in the ears, or bright lights like sparks passing before the eyes, and by the sensation of cold vapor in a stream towards the head or brain, when all consciousness is rapidly lost. Then there are noises in the intestines from flatus, sometimes an inability to retain the contents of the bowels, with unconscious dejections. In this case, the tone or persistent reflex power of the sphincters is tem-

porally lost. Sometimes the veins of the neck are distended with blood, the carotid and temporal arteries evince increased activity; there are palpitations of the heart, vertigo, and melancholic reveries, and an increased secretion and flow of tears. The *aura epileptica* may begin in the face, the head, the uterus, the stomach, one or the other of the lower or upper extremities, or one or the other of the testicles. In other cases there are experienced slight spasmodic twitchings in the muscles of the face and the extremities, and painful sensations along the course of other muscles. Stupor and dullness are perceived by the friends of the patient; he is unsocial, acerbic, irritable and morose.

Sometimes there is an unusual exhilaration of spirits, and taciturnity yields to social enjoyment in free conversation, the appetite becoming keen and sometimes even voracious.

Sometimes there is ptyalism, diarrhea, nausea and vomiting, hysterical symptoms and wakefulness. A loud scream or a sudden sharp cry gives notice that the patient is seized with the paroxysm. If seized while standing he falls; if while sitting he loses his position upon the seat, and rolls to the ground in severe convulsive movements. The attention of the bystanders, or those more distant, who hear the sound occasioned by the fall is now attracted, who observe the sufferer, usually violently convulsed, or in some instances, slightly. In either case, if their nature was not understood, they are alarming, and in the more severe forms the manifestations are frightful. The eyes are seen to start and even to project forward, are permanently turned toward the nose, or they are in a tumultuous motion. In many cases the conjunctiva are injected with blood. The muscles of the face are violently spasmodized and distorted, rendering the expression truly hideous. The lips are thrown out, and often covered with frothy mucous, with blood admixed, the latter oozing from wounds inflicted by the teeth upon the tongue, and the angles of the mouth are drawn backward toward the ears, or a single corner may be thus distorted.

The lower jaw is brought closely to the upper, and held there in rigid contact by firm contraction. Oftentimes the tongue is included and consequently severely injured. The head performs a rotary movement by turning first to one side then the

other, or it may be drawn persistently backward and maintained there with so much rigidity by the contracted cervical muscles, as to defy the exercise of all reasonable force to overcome it. The body is twisted, bends, rolls, or is fixed and sternly rigid.

The extremities are first strongly drawn, then forcibly and suddenly extended, and the toes and fingers are also drawn, particularly the thumb, which is brought into the palm of the hand. The diaphragm, the costal, and respirato-abdominal muscle, partake, to some extent, in these sufferings.

Respiration.—Irregular, sometimes slow, often hurried, sometimes inspiratory act is strongly performed, and again the expiratory, and often it is stertorous. The voice is very often a brief, emphatic and abrupt grunt, sometimes a succession of groans; again, it may be a plaintive moan. There are deep drawn sighs produced by full and free inhalation of air, then very suddenly expelled.

Pulse.—At first rapid and small, then full, hard and irregular; ceases for a time, then becomes regular and full toward the close of the paroxysm.

Excretions.—Sometimes vomiting takes place. Mucous or the undigested food and indigestible materials of the stomach are thrown up, but with difficulty, as the teeth are firmly closed. There are involuntary discharges of urine, of fæces and often of semen in the male; the perspiration is often profuse, and this sometimes shows globules of blood, because of the strongly congested state of the extreme vessels. Sometimes blood is forced from the ears, the eyes and the nose.

Consciousness.—This has been wholly lost, and the sufferer awakes from the paroxysm to a state of semi-consciousness, but entirely unconscious of the severe and violent affliction through which he has passed. Prostrated from the severity of the paroxysm, nature seeks restoration in a profound sleep, from which he may awake only to be plunged again into another convulsive state, as severe, and even more so than the one from which he has just emerged. He passes through another and another, and still another ordeal, as in an instance which came recently under my own immediate observation. Death may occur during a severe paroxysm, from spasm of the glottis, and the consequent accumulation of blood in the cerebral vessels.

The foregoing is a recital of the more severe and extravagant forms of the disease, but the symptoms are not always thus distressing or threatening. There is a milder form of phenomena, as for instance, the patient may be first seized with nausea; this will be succeeded by a sense of faintness, and to this will be added unconsciousness, insensibility, but without convulsive movements. The nausea may be followed by vomiting, which may be beneficial, but yet the nausea may continue with confusion of mind for some hours.

The above is a modified form of the first, and yet there are other symptoms even more mild and less harrassing or depressing than these. The individual may be seized while conversing; he suddenly fails to articulate, or, if still able to utter sounds, they are hesitating, stuttering, confused and disconnected. The eyes now stare, and their expression meaningless, and their stare vacant. If the voice is suspended for a short time, it is resumed again at the place in the sentence where interrupted.* During this time the patient suffers from some distressing emotions and hallucinations as if in a troubled dream.

These sub-epileptic forms, or the *vertege epileptique* of the French, are regarded by some as mere *attacks*, rather than those of true epilepsy, but in my opinion without any good reason for establishing such a distinction. It is as much an epileptic seizure as the premonitory symptoms of cholera are indications that the individual is attacked with cholera.

They are but modified cases, and for some reason are less aggravated, yet are epilepsy, and usually take in all the characteristics of the more aggravated, in process of time. In pneumonitis there is first the stage of irritation, which is soon followed by the inflammatory congestive stage, and this again is followed by the more aggravated form or condition of solidification.

One lobe of a lung may be involved only, or those of both lungs, or it may involve one entire lobe, or only the lobules here and there of one or more lobes, and yet notwithstanding these different aspects and conditions, it is nevertheless pneumonitis, when it is detected in either stage or pathological conditions.

Varieties or Species.—Esquirol divides epilepsy into three va-

*The cases of Esquirol and Ploupart.

rieties, viz.: *essential*, *sympathetic* and *symptomatic*. The class which he denominates *essential* is synonymous with the *idiopathic*, of which he makes three varieties, as follows:—From external causes, as from compression, contusion, fracture and insulation.

He makes four varieties of the sympathetic, as those cases arising from gastric or intestinal irritation; from plethora; from a disordered sympathetic system; from disorders of the genital system; and those which arise from disease of any of the external organs.

Epilepsy is symptomatic of some of the exanthemata, as rubiola, scarlatina, variola, &c.

There is a form which is *simulated* in order to accomplish some design, of acquiring something ardently desired, or to avoid some unpleasant result, or escape the performance of some duty required of them. The Encyclopedia of Practical Medicine gives two species only—the *epilepsia cerebialis* and *epilepsia sympathica*. Of the latter there are five varieties, viz: *epilepsia stomachica*, *hepatica*, *nervosa*, *uterine* and *a dolore*. This division is arranged upon the fact of the organs from which each has derived its name, being the seat or source of irritation.

A better division might be made, into the *primary* and *secondary*, or *central* and *distal*. In the first, it may, and often does take place from external injuries of the head, or those of the calvarium, and in the meninges or substance of the brain. In the second, it occurs from some distal irritation in the organs or structures remote, but involving the brain through sympathetic agencies. The feigned epilepsy is entitled to no rank, as it is a negative condition or term applied to that which does not exist. It is, therefore, no disease at all, and should not be found in the classification, because we have no authority for naming a form of disease which does not exist.

This division and classification has reference to the structures primarily involved, but I see no reason for a further and extended classification of the second species, viz: the *epilepsia symptomatica*, and name each variety from the organ or tissue whence the irritation proceeds. To do so would be to swell the nomenclature unnecessarily, and by multiplying varieties produce confusion. The phenomena are the same whether the irritation proceed from the liver, the stomach, the uterus, the testicles or intestines. The

irritation must be transmitted to the centre from either of these structures before the seizure is induced, provided it be of this class.

The *sympathic* variety or class, is contradistinguished from that of the *cerebralis*, in the fact that in the latter the agents or causes which awaken the paroxysm exist within the brain, or in such close proximity as act directly upon it, while in the former the attack is brought about by irritation, transmitted from some distal point or organ. These facts should be borne in mind, as they enter with deep interest and meaning into our diagnosis, prognosis and treatment. If it arise from a lesion of structure within the brain, our skill is required to detect this fact, and when found our prognosis is unfavorable, though our remedial measures will be more intelligently directed. But yet a simple irritation in a distal organ, although more under control, provided the cause be removed, may, by long continuance, produce permanent and incurable lesion of the great nerve-centres. This fact indicates the necessity of early attention because before lesion obtains, the cause being removed, there is a well grounded hope that the effect may cease.

Morbid Anatomy.—The appearances upon dissection are varied. In those who die from the disease, and where dissections have been made there have been revealed within the cranium the evidences of morbid changes, such as we might be taught to expect from the character and persistence of the previous symptoms and history of the cases. Thickening and thinning of the bony structures with osseous tumors. The intra-cranial evidences, in some cases, consists of effusion of serum between the inner table of the skull and the meninges of the brain; these last often thickened and softened, and their vessels dilated and varicose, engorged, containing concretions both fibrous and osseous. There is, in other cases, softening of the brain, or there may be induration. There are tumors, scirrhus in some, fatty or sarcomatous in others. There may be tubercles or hydatids, and cysts, in which last there is a contained serum. The ventricles may contain serum or scirrhus, tuberculous, fibrous, or even osseous tumors, also. In the substance of the brain, as observed, have been found all the above described tumors or abscesses, and a peculiar white substance.

The brothers Wenzel describe a peculiar thinness of the sphenoidal bone, and other changes which destroy the natural relations and form of the osseous portion of the base of the skull. The change in the pineal gland has been found both hard and soft in epilepsy, by Baily, Scømmering and Greding. The latter has also observed it to be flooded with serum. The pituitary gland attracted the attention of the Wenzels, who found it in a number of cases enlarged; in some cases containing a thick fluid, and in others a matter which resembled a powder. Rokitsansky mentions the presence of a substance like sand. He says he has also seen this in healthy subjects.

[TO BE CONTINUED.]

From the Nashville Journal of Medicine and Surgery.

Contributions to the Medical Flora of Nashville.

By GEORGE S. BLACKIE, M. D., University of Nashville.

"Medical plants are compound medicines prepared by the hand of nature."—PRINC. MED.

An accurate knowledge of the objects around him ought to be acquired by every physician. That an acquaintance with the plants which our Tennessee, and most southern doctors, ride past every day of their lives, may be turned to some practical account, I have endeavored to show in the following pages. Having been of late moving about a good deal in the woods, fields, and river banks, in the vicinity of the city, I have noted all the medical plants I encountered in my rambles, and here present them to the reader without further introduction. He must bear in mind that I include in this list only such as are in a fit state for medical collection at this season (the end of July and commencement of August), and that I have attempted no further arrangement than that of grouping them according to the ordinary system of the pharmacopœias.

ANTHELMINTICS.

By no means infrequent in our darker forests and shady road-side, where the soil is dry and rich, we may observe the deep red and yellow-centred corollas of the Carolina pink, or pink root (*spigelia marilandica*). Almost every one accustomed to observe the flowers around him, knows this one. It is almost the only Tennessee representative of the great family *loganiaceæ*, an order which is largely represented in the tropical climates, and to which the St Ignatius' bean (*ignatia amara*), and the *strychnos nux vomica*, two of our deadliest poisons, belong. The *spigelia* is named from Spigelius, an

ominent botanist of Padua, and is indigenous in all the southern part of North America, from Pennsylvania to Georgia and Louisiana, but on account of the severity of the winter seasons cannot flourish further north. It is a slender, square-stemmed plant, with opposite sessile ovate leaves, terminating in a spike of flowers ranged on one side of the foot-stalk. The calyx is short, in five segments; the corolla long and funnel-shaped, crimson and pink; the stamens are five, with arrow-like anthers; the pistil is superior, having a long style with fringed stigmas. As an anthelmintic, it has been long employed. Gardon, one of our pioneer botanists, probably deserves the credit of having introduced it to the notice of the colonists and the English, he having learned its properties from the Cherokee Indians. The best part to employ is the root, which is given in doses of from ten grains to a drachm, twice or thrice daily. Frequently, however, narcotic symptoms follow its exhibition, such as stupor, headache, dizziness, flushings of the face, and stiffness of the eyelids. When this is observed, it ought to be given in combination with cathartics, which however are not necessary always, for the plant itself acts as a purgative on many persons. It is most valuable in the treatment of *lumbrici*, while for tape-worm it seems to be almost useless. Dr Burnett, who, by the way, advocated its expulsion from the Pharmacopœia, recommended the following formula to those who could obtain the fresh plant:—

Take of dried roots of Spigelia,	-	-	-	℥ ss.
Senna leaves,	-	-	-	3 ii.
Dried orange peel,	-	-	-	3 ii.
Crushed fennel seed,	-	-	-	: 3 ii.
Boiling water.	-	-	-	℥ xij.

Macerate for two hours in a covered but not air-tight jar, and strain. Dose— a wine-glassful three times a day on an empty stomach. Rhubarb may be made to take the place of senna. The *spigelia* has been found in some parts of this country, to be of undoubted service in what mothers call worm fever.

The peach tree (*amygdalus persica*), too well known to need description, although not largely, has yet been employed with considerable success as an anthelmintic. The decoction of the leaves is bitter, somewhat carminative, diuretic and vermifuge. Large doses also prove sometimes purgative, but it is not safe so to administer it. A tea of the fully formed blossoms is the best method of using this plant, and Lindley thinks that in the blossoms alone is the vermifuge quality resident.

Worm-seed (*chenopodium ambrosioides* var. *anthelminticum*), the *chenopodium anthelminticum* of the Pharmacopœia, which is not uncommon on waste places in the country, is most probably a plant naturalized from Tropical America, but which having once found its way here, has discovered a congenial home and flourishes as well as in the place of its origin. It grows also in many of the northern and western States, and is known also by the names of Jerusalem oak, goosefoot, wormwood, and stinking-weed, the last derived from its abominable smell, its chief characteristic. The root is perennial (probably) and much branched, while the stem is upright and consider-

ably branched, giving the plant a shrubby appearance; the leaves without stalk, alternate and much notched; the flowers, small, green, and though easily recognized in panicles, yet the individuals are in conspicuous. The panicles are slender and destitute of leaves. The seeds are flat, lenticular, shining, and covered by the persistent calyx. The plant is a member of the natural family *atriplicaceæ*, which includes a large proportion of the plants of desolate and waste places. Many of this family contain a strongly smelling, nauseous, essential oil, as, for example, the *chenopodium olidum*, the stinking herb of England. The medical properties of worm-seed are resident in such an oil, which is distributed throughout the plant, but more particularly in the leaves and seeds. It commences to blossom in July and continues to flower till September, when it may be collected and dried. The seed should be collected in October. Drying does not remove their peculiar smell. The oil has a strong vermifuge action, and is very likely the best anthelmintic we possess, except Koussou, which is too expensive to be largely employed. The dried seeds are powdered and given in doses of from one to two scruples, thrice a day. An oil is also procured by distillation, which when fresh is of a light yellow color, but becomes brown by age. This oil is given in doses of from four to eight drops night and morning. The seeds are powdered, mixed with syrup, and given as an electuary. The oil is, however, more frequently employed, though its smell and taste render it very hard for children to take it. Mixed with sugar and orange peel it can, however, be swallowed without much difficulty.

ANODYNE.

Verbascum Thapsus, our common mullein, which rears its tall spikes of yellow flowers closely packed together, and spread its large velvety leaves on every road-side or waste spot, is notwithstanding its luxuriance, undoubtedly a foreigner, and was introduced into Virginia by some of the early settlers. This luxuriance exhibited by many foreign plants on being introduced into this country is a very striking fact. We find numbers of foreign plants in our country attaining a size and power of reproduction much greater than that which they possess in their native lands. Thus we find the dog fennel, the Jamestown weed, the dock, nettle, and many others, which, coming over with our earliest settlers, seem to have followed their example by destroying the aborigines and taking their places. On the other hand, in Europe we find that many American plants have taken a similar hold on the soil. Thus the banks of the Rhine are in many places yellow with the evening primrose, the Canadian flea-bane is a nuisance to French and Belgian farmers, the *udora canadensis* actually blocks up the canals and smaller rivers of England, having to be annually removed to permit the water traffic to go on uninterrupted, and the locust tree covers whole table lands in Central Germany. The softness of the leaves of the mullein first suggested the idea of using them as a substitute for flannel, for rubbing in rheumatism. Subsequently they were used as an emollient poultice, and were found to be a good discutient for swellings. A decoction of the blossom is better than of

the leaves, its principal properties being anodyne and antispasmodic. Some have found it of value in coughs. Above all things, (and as perhaps the most valuable use of the plant), I would recommend the use of a strong decoction of the leaves for wounds and bruises of horses and cattle. In many parts of England it is regarded almost as a charm. A mixture of the bruised leaves with lard is a popular and efficient remedy in piles.

ANTI-SCORBUTIC.

The wood sorrel (*oxalis stricta*), with its tripartite leaves, and its yellow and pinkish flowers, is well-known to all both by its appearance and taste. It flowers in April and May, and is at present in fruit and fast drying up. Its medical properties are the same as those of the *oxalis acetosella* of Europe, which has long been regarded as an officinal plant there. Its leaves afford one of the most grateful of our vegetable acids. Its juice is often used as a refreshing drink in fevers, and boiled in milk it forms a most delicious whey. Its fresh leaves are invaluable as a salad in cases of scurvy, and even do no small good when placed on scorbutic sores.

ANTI-PERIODIC.

Along the banks of our rivers and creeks grow many varieties and species of willow, (*Salix muhlenbergia*, *S. discolor*, *S. conifera*, *S. rosmarinifolia*, *S. nigra*, etc.), all of which possess a similar medical property, and though the individual species are, undoubtedly hard to distinguish one from the other, yet the long narrow leaves and slender stems, and in spring time, the long wooly catkins cause the genus to be very readily known. The bark of the willows is generally astringent and bitter, and has been recommended as a substitute for cinchona bark. It contains a peculiar principle, resembling quinine, and named salicine. This salicine is a bitter neutraline, crystalline substance, obtained from the different barks by means of lime, concentrating what remains to a syrup, throwing down the gummy matter with rectified spirit, evaporating the residue sufficiently for crystals to form, and purifying them in a watery solution, by means of animal charcoal. These crystals, treated with a few drops of commercial sulphuric acid, yield a tint of carmine red. Salicine is given as a tonic in dyspepsia, and as an antiperiodic in doses of from two to ten grains daily. It is not so reliable as quinine, but, however, not so apt to cause congestion of the head. The infusion of willow bark may be given for the same purposes, although now a days its use is almost superseded by that of the active principle. From twenty to forty grains of salicine may be taken daily, or in the intervals between the paroxysms of our intermittents. Magendie says he has seen fevers cut short in one day by three doses of six grains each. Dr. Wood tells us that the decoction of willow has been found beneficial as an external application in foul and indolent ulcers, and I remember an old man in the north telling me that he always employed it in the skin diseases of children, while the women of his parts found it good for leucorrhœa.

[TO BE CONTINUED.]

Aconite in Rheumatism.

By G. W. CLAIBORNE, M. D., of Petersburg, Virginia.

During my winter practice, it has been my lot to encounter quite a number of rheumatic patients, and hence, I have been induced to place before the profession a remedy which, above all others, I deem most suitable for combatting this disease.

CASE I. About the 1st of December, I was called to see a young lady, æt. 20; complexion fair, eyes blue, hair dark; who, from exposure to cold, was suffering with sharp, shooting pains through each joint in her body; right knee and ankle were quite swollen and red, tender; pulse 130; face flushed; skin warm; anorexia; tongue white; rheumatism hereditary.

December 4th, A. M.—R. Vin. colchici, 3 i.; aquæ fontis, ʒ vss.; magnesias henri, ʒj.—M. Dose one half; to be repeated in four hour.

5th, A. M.—Disease not yet abated; knees and ankles both extremely swollen; considerable heat and redness; pulse 120, hard and full; skin dry; secretions torpid; continue the colchicum mixture, and at bed-time give hydrarg. mit. chlo. grs. viij.; pulv. Dover. grs. v. Apply aconite warm, on flannel, to the joints.

6th, A. M.—Medicine has operated; pulse 100, soft; secretions aroused; slept some during the night; parts yet swollen, and painful when moved. Continue the aconite applications, and commence on the following preparation:—

R: Ammonia phosphatis, 3 i.; aquæ fontis, ʒ vss.; syrup limonis, 3 iij; tinct. aconitis fol. gtt. xxx.—M. Dose, two tablespoonsful every four hours.

7th, A. M.—This last preparation has acted finely; ankles and knees much relieved, can move them; complains of pain in each shoulder and wrist, with much tenderness; some pain felt in the hips; pulse 100; skin dry; continue the last solution, with an additional thirty drops of tincture aconitis. The following liniment to be used often on the affected joints:—

R.—Chloroform, ʒ iss.; tinct. aconitis, ʒ iss.; camphora sps. ʒj.; tinct. hyoscyami, ʒj.; ol. olivæ, ʒ i.—M. Ft. liniment.

8th, A. M.—Found that the medicine had operated freely; pulse 90, soft; face not so much flushed as on yesterday; moves herself with more ease, though arms and shoulders somewhat stiff; tongue clean, and not so dry as yesterday. Ordered simply tincture of aconite, in ten drops at each dose, every four hours; parts to be rubbed with the liniment. At bed-time, discontinue the aconite, and give hydrarg. mit. chlo. grs. vi.; pulv. Doveri grs. iv.

9th, A. M.—Is some better, though did not rest so well during the night; pain in one wrist and hand only; calomel has not operated, and hence ordered olei ricini, ʒ ss. Continue the application of the liniment, and give at bed-time four grains of Dover's powder.

10th.—She is up, and looks well; pulse soft and natural; appetite improved; complains of no pain at all; discontinue treatment, and give nourishment.

CASE II. Was called to Mr. B——, about the 20th of December; found him suffering with much pain in his back and limbs; face flushed; tongue foul at the base, at the point naked and glazed; has been afflicted off and on for several years with rheumatism, but never before experienced such general pain. Ordered hydrarg. mit. chlo. grs. viij.; pulv. Doveri grs. vi.—M. Ft. in pill No. ij.; one now, and the other at 5 P. M. Called about 6 P. M.; found that the medicines had not operated; fever considerable; pulse hard and full, 120; suffering with much pain. Ordered magnesia and colchicum, to commence about 10 o'clock, P. M., with a teaspoonful of the following, when pain is unbearable:—

R.—Sulphatis morph. gr. j.; aquæ. menth. pip. ℥j.; sach. alb. ʒi.—M. Sign anodyne.

December 21st, A. M.—He is somewhat easier than on yesterday, though slept but little during the night. Medicine operated freely; pain considerable in each hip; each knee swollen; face flushed; tongue clean, not so much glazed; pulse more soft, 110. Ordered the following liniment:—

R.—Tinct. aconitis, ʒ iss.; chloroform, ʒ iss.; tinct. hyosciam. ʒj.; spts. camphoræ, ʒj.—M. Sign liniment.

R.—Ammonia phosphatis, ʒ ij.; aquæ fontis, ʒ vss.; syrup limonis, ʒ ss.—M. Dose, magna cochlea quaque four to hora. The liniment to be applied to the parts most affected.

22d, A. M.—Patient no better; passed an unpleasant night; face still flushed; joints swollen, red and stiff; pulse 110; tongue clean; anorexia; medicine operated three times on yesterday. Ordered the following:—

R.—Tinct. aconitis, gtt. xxxv.; aquæ fontis, ʒ ij.—M. Dose, two table-spoonsful every six hours—parts affected to be rubbed with the liniment. Ordered some milk during the day. Called again at 5 P. M. Found him somewhat easier; pulse 100; joints not so tender; appetite returning:

R.—Ext. aconitis, grs. iv.; ext. hyosciam. grs. ij.; sulph. quiniæ, grs. vj. M. Ft. in pill, No. ij.; one at 7 P. M., and the other in five or six hours; if no sleep, continue the application of liniment to the affected joints.

23d.—Patient better; slept quite well during the night; pulse soft and about 90; tongue clean, moist; appetite fair, returning; the joints of his legs are yet somewhat swollen, and painful when moved; no redness however. Ordered the following:—

R.—Tinct. aconitis, gtt. xv.; syrup limonis, ʒ ss.—Dose, teaspoonful ter die. Continue the liniment to the joints.

24th, A. M.—Patient up and doing well; appetite good; urine indicating some excess of uric acid—for which ordered sodæ bicarb. grs. x, in a wine-glass of water, three times a day; Dover's powders, grs. v., at bed-time, and dismissed.

From these cases, together with others which have fallen into my hands, I believe it clearly apparent that the aconite treatment, together with a little mercury, where foul tongue and offensive breath indicate disordered secretions of the primæ viæ, is that which promises the most speedy cure. This treatment, together with some one of the alkalies, where the urine indicates an excess of uric acid, is that which I have generally adopted. After dismissing my patients, I usually order, for a day or two, a few grains of iodide potassium with syrup of gentian.—*Maryland and Virginia Med. Jour.*

Action of Different Medicines on the Mental Faculties.

By PROFESSOR OTTO.

All stimulant and exciting medicines increase the quantity of blood that is sent to the brain. If this quantity exceeds a certain amount, then most of the faculties of the mind become over-excited. Nevertheless, the degree of this action is observed to vary a good deal in different cerebral organizations; and it is also found that certain stimulants exercise a peculiar and characteristic influence upon special or individual faculties. Thus ammonia and its preparations, as well as musk, castor, wine, and ether, unquestionably enliven the imaginative powers, and thus serve to render the mind more fertile and creative. The empyreumatic oils are apt to induce a tendency to melancholy and mental hallucinations. Phosphorus acts on the instinct of propagation, and increases sexual desire; hence it has often been recommended in cases of impotence. Iodine seems to have a somewhat analogous influence; but then it often diminishes, at the same time, the energy of the intellectual powers. Cantharides, it is well known, are a direct stimulant of the sexual organs; while camphor tends to moderate and lull the irritability of these parts,

Of the metals, arsenic has a tendency to induce lowness and depression of the spirits; while the preparations of gold serve to elevate and excite them. Mercury is exceedingly apt to bring on a morbid sensibility, and an inaptitude for all active occupation.

Of narcotics, opium is found to augment the erotic propensities, as well as the general powers of the intellect, but more especially the imagination. Those who take it in excess are, it is well-known, liable to priapism. In smaller doses it enlivens the ideas and induces various hallucinations, so that it may be truly said that, during the stupor which it induces, the mind continues to be awake while the body is asleep. In some persons opium excites inordinate loquacity. Dr. Gregory says that this effect is produced more especially after the use of the muriate of morphia. He noticed this effect in numerous patients, and then tried the experiment on himself with a similar result.

He felt, he tells us, while under the operation, an invincible desire to speak, and possessed, moreover, an unusual fluency of language. Hence he recommends its use to those who may be called upon to address any public assembly, and who have not sufficient confidence in their own unassisted powers.

Other narcotics are observed to act very differently on the brain and its faculties from opium. Belladonna usually impairs the intellectual energies; hyoscyamus renders the person violent, impetuous and ill-mannered. Conium dulls and deadens the intellect, and digitalis is decidedly anti-aphrodisiac. Hemp will often induce an inextinguishable gaiety of spirits; it enters into the composition of the intoxicating drink which the Indians call *bauss*. The use of the *amanita muscaria* is said to have inspired the Scandinavian warriors with a wild and ferocious courage. Tobacco acts in a very similar manner with opium, even in those persons who are accustomed to its use; almost all smokers assert that it stimulates the powers of the imagination.

If the psychological action of medicines were better known, medical men might be able to vary their exhibition, according to the characters and mental peculiarities of their patients. The treatment of different kinds of monomaniacal derangement also might be much improved; and it is not improbable but that even a favorable change might be wrought on certain vicious and perverse dispositions, which unfortunately resist all attempts at reformation, whether in the way of admonition, reproof, or even of correction.—*Zeitschrift für die Gesamnte Medicin, and Medico-Chirurgical Review.*

Selections.

CHLOROFORM AS A HYPNOTIC.—Opium and lactucarium are almost the only two agents which induce sleep by a special sedative action; and they both have their inconvenience as well as their highly valuable properties. A hypnotic without these inconveniences would prove an agent of great value, and M. Fonssagrives, of Cherbourg, believes that chloroform is that agent, judging from his having used it with constant success since 1854, when it was recommended by Dr. Uytterhaven, a Belgian practitioner. Sleeplessness arises from different causes; sometimes it is the result of the persistence of a painful symptom which forcibly excludes repose; at others it constitutes an entirely nervous symptom originating in some moral suffering, absorbing preoccupation, or too active intellectual exertion; while at other times it proceeds from a vicious habit of the cerebral centre. The sleeplessness becoming a cause of sleeplessness; or, finally, the sleeplessness may result from the abuse of hypnotic remedies, or may be an epiphenomenon of certain acute diseases. It is in these latter cases that chloroform is of especial service. The dose is small but effectual, namely, from five to ten drops.—*Bulletin de Therap.*

IODOHYDRATE OF AMMONIA IN CONSTITUTIONAL SYPHILIS.—Prof. Gamberini deduces the following conclusions from fourteen cases :—1. Iodide of ammonia and the iodohydrate of ammonia are indicated in the same cases of syphilitic diseases as the iodide of potas. 2. The treatment from the employment of this remedy in increasing doses from 10 to 80 centigrammes daily, in from 100 to 180 grammes of some liquid, has lasted from 14 to 35 days, averaging 21 days. 3. A sensation of burning or heat in the throat and stomach of some patients forced us to suspend temporarily the iodide, as well as to lessen the dose. 4. A liniment, composed of the same remedy, with olive oil, 15 centigrammes of the former, and 30 centigrammes of the latter, has assisted in curing the osteocopic pains. 5. Syphilitic accidents cured by iodide of ammonia have been cases of arthralgia, rheumatic neuralgia, periostosis, ganglionic enlargements of the groins and neck, and a papulo-vesicular eruption of the back. The process of making this medicine is very simple. It is that of Ruspini, consisting in precipitating a solution of the iodide of iron by carbonate of ammonia, filtering the solution, which is then to be evaporated promptly, until a pellicle is formed, and then crystallize. This salt crystallizes in cubes, and is very soluble in water. Its taste is not very disagreeable, being a little more bitter than iodide of potas.—*Bolletino delle Scienza Medica : L'Union Medicale de la Gironde.*

VENTILATION OF ROOMS AT NIGHT.—An extraordinary fallacy is the dread of night air. What air can we breathe at night but night air? The choice is between pure night air from without and foul night air from within. Most people prefer the latter. An unaccountable choice. What will they say if it is proved to be true, that fully one-half of all the disease we suffer from, is occasioned by people sleeping with their windows shut? An open window most nights in the year can never hurt any one. In great cities night air is often the best and purest air to be had in the twenty-four hours. I could better understand in town shutting the windows during the day than during the night, for the sake of the sick. The absence of smoke, the quiet, all tend to making night the best time for airing patients. One of our highest medical authorities on consumption and climate has told me that the air of London is never so good as after ten o'clock at night.—*Florence Nightingale.*

CHLORIDE OF ZINC MOULDED INTO STICKS FOR THE PURPOSE OF CAUTERIZATION.—Soften gutta-percha in boiling alcohol, and incorporate it with finely pulverized chloride of lime in a warm porcelain mortar, taking equal parts of each. Then roll rapidly on a porphyry slab, to the diameter of a quill, and divide in fragments, each of which shall be pointed at one end. Keep these in a wide-mouthed bottle in powdered lime. These sticks remain perfectly hard, are easily handled, cauterize with great regularity, and act as a sponge through which the chloride will slowly exude, becoming liquid by the action of the air and the skin.—*Lancet.*

The Obstetrical Clinic at the Pennsylvania Medical College, opened on Saturday morning, Sept. 1st.

IODIDE OF PROPYLAMINE.—According to M. Benjamin J. Crew, in the *American Journal of Pharmacy*, for September, propylamine combines readily with the aid of a gentle heat with iodine, and forms a colorless solution in which the characteristic odor of these two substances can be perceived. It may be prepared by adding iodine to a convenient quantity of propylamine in a glass flask over a sand bath as long as the iodine is taken up; a deep red solution is first formed, which, as the combination is effected, becomes gradually colorless; in case of an excess of iodine, a small addition of propylamine will speedily take it up. M. Crew suggests that the iodide of propylamine might be found to answer better in certain cases than the chloride. He proposes the following formula:—R. Iodide of propylamine, 25 drops; peppermint water, 6 f. oz.; sugar 2 drams. Dose—A table-spoonful every two hours. In this form the patient would receive the $\frac{1}{4}$ grain of iodine at a dose.

PIPERIN IN INTERMITTENT FEVER.—Dr. Meli, of Venice, as the results of numerous experiments, comes to the following conclusions:—1. The febrifuge power of piperin is both energetic and rapid. 2. Its activity is much greater than that of cinchona. 3. It is more convenient than cinchona, and its succedanea, exhibiting a great activity in a very small compass. 4. It neither changes, retards, or suppresses any secretion, or excretion. The alvine dejections are regularized, and the urinary secretion is rendered active.—*Med. Times and Gaz.*

CHLOROFORM IN SCABIES.—Professor Bock, in *Schmidt's Jahrbuch* for August, states that the external application of chloroform is useful in some cases of itch. This substance appears to kill the insect, and moreover, by producing anæsthesia, it relieves the irritability of the skin. M. Bock has never observed any inconvenience to arise from the use of chloroform; and the sensation of burning, which it produces for a short time, is quite trifling in comparison with the intolerable itching caused by the disease.—*Chemist and Druggist.*

LOTION FOR MENTAGRA.—M. Richard has recently called attention to the good effects which he has seen from the application, in patients affected with mentagra, of a lotion composed of sulphate of zinc and sulphate of copper in distilled water. After the employment of ordinary remedies, and when the affected part is cleansed from the crusts which cover it, the lotion is applied frequently; and under this treatment it has been found that the disease disappears in a comparatively short period.—*Br. Am. Jour.*

TANNIN AS AN ANTIDOTE TO STRYCHNIA.—Dr. Kurzak, in the *Zeitschrift der Gesellschaft der Aerzte zu Wien*, has published a paper in which he claims tannin to be a most excellent antidote in strychnia poisoning. The tannate of strychnia formed, is insoluble in the intestinal juices. For 1 part of strychnia, 20 to 25 parts of tannin should be given, or even more, because a considerable part of the tannin is precipitated by the contents of the stomach—gelatine, for example. When tannic acid cannot be obtained, strong infusions of powdered gall-nuts, or green tea, should be used.

EFFICACY OF ETHER IN CASES OF DEAFNESS.—Dr. Lafargue has communicated to the *Bulletin de Therapeutique* the following important case of a young deaf and dumb boy cured by ether, according to Mdlle. Cleret's method:—"Young Wailloz, of Libourne, is eight years of age; he is free from any scrofulous affection, which by many is considered the chief cause of surdo-mutism; and on the contrary, has a very strong constitution, and as lively and active as his age requires. He was born deaf and dumb, and this affection cannot be attributed to any hereditary cause, since all the members of his family enjoy the most perfect health. His father, had, a short time ago, taken him to Bordeaux, to be examined by the members of the Academy, who all pronounced him to be incurable. His treatment by ether began on the 27th of April last, when eight drops of rectified sulphuric ether was instilled into each ear. At first, the ether caused pain in the right ear, to avoid which the dose for that ear was reduced to four drops; but in the sequel this diminution was discontinued as unnecessary. The relief was almost instantaneous; on the second or third day, young Wailloz began to articulate the words 'papa, mama, tante, boire,' but, singularly enough, always in a whisper. Dr. Lafargue believes this to be caused by want of habit, and likely to wear off by the gradual development of his vocal powers. The patient hears the appeal of an alarm, the striking of a clock, and the sound of a bird-call imitating the note of a quail. These unusual noises amuse him very much. He can hear better with the right than with the left ear; and as it was the former which was painful when ether was first applied, Dr. Lafargue suspects that the curative activity of the remedy is in proportion to the physiological effect it produces; a proposition only to be satisfactorily answered by future experiment. The patient is already sufficiently recovered to receive *viva voce* instruction, but the treatment is still continued."—*Chemist and Druggist*.

SUBNITRATE OF BISMUTH IN THE TREATMENT OF BURNS AND SCALDS.—Dr. Richardson, in the *American Medical Times*, says:—"I was induced to use bismuth in the treatment of burns from its well-known effect in calming irritation, and even actual inflammation of mucous membranes. The following is the method of employing it: rub the bismuth in a mortar, with a sufficient amount of glycerine to form a paste of thick paint, which should be applied to the affected surface by means of a camel's hair pencil, or a mop made of soft linen; the parts should be first thoroughly dried and each blister opened with a needle; after a thick coat has been applied, the parts should be protected from the bed clothes by a layer of clean carded cotton. In burns of the first degree, one application will often suffice, but in those of the second it may be necessary to repeat it, in part at least, from day to day, in consequence of its disturbance and the wetting of the cotton by the discharges. This method of treating burns has proved superior to every other in the Charity Hospital."

QUININE IN CROUP.—W. H. Baker, M. D., of Texas, Ky., says:—"On the 15th of April last, about 11 o'clock at night I was called to visit a child suffering with croup. It was six miles to the residence of its parents, and I was

told by the messenger that it was feared the child would die before I could reach it. He was still alive, however, upon our arrival, although apparently sinking very fast. Gave it ipecac, tartar emetic and hive syrup, but without producing emesis. I then placed the little patient in a tub of hot water, with the hope that it might produce relief, but to no purpose. The throat was then irritated with a feather, and cauterized with nitrate of silver, but still vomiting could not be induced. It was apparent to me that the child must die unless something was soon done for its relief, and having read in the *Journal* of the great efficacy of quinine in croup, I determined as a last resort to try it. I therefore administered a solution—one grain of quinine to a tablespoonful of water—a tablespoonful of which is swallowed with great difficulty. Its mother begged me to give it no more, as its suffering was so great. Its extremities were at this time quite cold. I however kept giving it the quinine, a tablespoonful every hour. A piece of flannel with turpentine was applied around its neck. After the third dose of the solution the patient broke out in a perspiration. This treatment was kept up for twenty-four hours, when it was administered every two hours for twenty-four hours longer, and then discontinued. The patient, who was about four years old, soon fully recovered.—*Nashville Jour. of Med. and Surg.*

P h a r m a c y .

OINTMENT FOR PILES.

Ointment of Belladonna,.....	60 grammes.
Powdered Camphor,.....	4 "
Tincture of camphorated opium,.....	4 "

Apply this for piles to the parts, and upon the canal of the urethra in blennorrhagia.—*Jour. de Chimie Medicale.*

OPIAT FOR BLENNORRHAGIA.

Cubebæ,.....	60 grammes.
Copaiba,.....	20 "
Catechu in powder,.....	5 "
Conserve of roses,.....	25 "

Take of this mixture, twice a day, a piece as large as a walnut.—*Jour. de Chimique and Medicine Practique.*

FERRURET COD LIVER OIL.

Brown cod liver oil,.....	250 grammes.
Distilled water,.....	250 "
Carbonate of soda,.....	14 "
Proto-sulphate of iron,.....	15 "

Mix in a large bottle ; shake from time to time for eight days ; filter through filtering paper ; separate the water and filter the oils the second time ; the oil oxydizes and combines with the iron. It contains one per cent. of iron ; every gramme containing one centigramme of iron.—*Jour. de Bordeaux.*

MIXTURE IN PNEUMONIA.

By Dr. Hiard.

Distilled water of peppermint,	80 grammes.
“ orange flowers,	30 “
Syrup of orgeat,	60 “
Camphor,	30 centigrammes.
Tincture of digitalis,	15 drops.
“ castoreum,	25 “

A spoonful three times a day.

WASH FOR LUPUS.

Distilled water,	250 grammes.
Bichloride of mercury,	40 centigrammes.
Hydrochloric acid,	16 drops.

Apply three times a day.—*Bull. de Therap.*

HYPOPHOSPHITE OF QUINIA.

By J. Lawrence Smith, M. D., Prof. of Chemistry, University of Louisville.

I brought this article to public notice a short time ago, through the pages of this Journal. As I was not then prepared to give a statement of its composition, that omission will now be made up.

In one hundred parts there is—

Quinine,	83.00
Hypophosphorous acid,	10.09
Water of combination,	2.30
Water of crystallization,	4.60

Giving the formula :— $C^{40}H^{24}N^2O^4, PO, HO + 2 \text{ aq.}$; or, according to Gerhard's method of statement, just double that formula. Its physical characters have been fully described.

The manner in which it is manufactured at the Louisville Chemical Works, is as follows :—50 ounces of sulphate of quinine is placed in a large porcelain capsule ; to this is added 2 gallons of distilled water, and 2 ounces of hypophosphorous acid. Warm up to about $200^{\circ}F.$, and make a perfect magma of the sulphate of quinine and water, then add a solution of hypophosphite of baryta, until a perfect decomposition is produced. Great care must be taken to have no excess of baryta salt ; better have a slight excess of sulphate of quinine. But a little skill will enable a competent operator to obtain an exact neutralization. While warm, the solution of hypophosphite of quinine is

filtered off from the sulphate of baryta and allowed to crystallize. The sulphate of baryta is then washed, and the washings added to the mother water of the first crystallization, and evaporated with great care, when other crystals may be obtained. If not carefully evaporated, it will become colored. The crystals are drained and dried on a cloth stretcher.—*Am. Jour. Pharm.*

TARTRO-CITRIC LEMONADE.

(*Liquor Sodæ Tartras.*)

By Prof. J. Lawrence Smith.

There is nothing new in the use of tartrate of soda as a purgative, and it is only surprising, that once known, it ever gave place to the citrate of magnesia to which there are several objections well-known to practitioners. Among these I would enumerate the not unfrequent irregularity of its operation, sometimes not acting as promptly as desired, at other times with too great and continued energy, requiring anodynes to arrest its operation. Again, owing to the manner in which it is made, and the want of uniformity in the composition of the commercial carbonate and calcined magnesia, the amount of free acid in the solution varies much, when made at different times by different operators, and with different lots of materials. There being sometimes two or three drams of free acid present in a bottle, and besides, under all circumstances, the mixture must be quite acid in order to retain for any length of time the citrate of magnesia in solution. Mitscherlich and Bence Jones have both made experiments on citric acid, and they consider it a poison analogous to oxalic acid.

Yet another objection to citrate of magnesia is the certainty of its undergoing decomposition, resulting in the deposition of an insoluble citrate of magnesia, a change that takes place very rapidly when the bottle is opened.

With these facts before me, I compounded a preparation of tartrate of soda with lemon syrup and water, (at first I introduced a small portion of citric acid, calling the mixture tartro-citric lemonade.)

It is free from the objections of the citrate of magnesia—is a prompt and certain purgative, without excessive action, and uniform in composition, does not undergo decomposition even after the bottle is opened, even more agreeable to the taste and less costly than citrate of magnesia. It was first manufactured by T. E. Jenkins & Co., and is now also manufactured to a large extent at the Louisville Chemical Works.

The formula adopted by Messrs. T. E. Jenkins & Co., at the Louisville Chemical Works, which is under my direction, is—

Sal soda,.....	21 lbs. 14. oz. avoirdupois.
Tartaric acid,.....	15 lbs. “
Sugar, (white).....	24 lbs. “
Water, to make.....	25 gals. “

It is then put into strong twelve ounce bottles, and thirty-five grains of bicarbonate of soda added to each bottle, and immediately corked and fastened by twine or wire.

This preparation has been used in Louisville for about six years, and is gradually extending over various parts of the west and south. Wherever it has once got into use, it has never been abandoned, and the names of hundreds of physicians could be obtained, certifying to its utility and preference over the citrate of magnesia. I think that it would be well for our pharmacopœia to adopt it.—*Am. Jour. Pharm.*

RED PRECIPITATE OINTMENT.

By F. A. Keffer.

TO THE EDITOR OF THE AMERICAN JOURNAL OF PHARMACY,

Sir:—Being aware of the great difficulty in keeping, especially in warm weather, the Ung. hydrargyri oxidi rubri, I have been led to make some experiments with the same, and find that, instead of using lard, if I use oleum ricini, that the preparation will keep perfectly well for a great length of time. I have now in my possession a sample that has been made over two years, and it is perfectly free from rancidity, and still retains its original color, the mercury to all appearance not having become deoxydized in the least. My formula is

R. Olei ricini,.....	3 iiss.
Ceræ albæ,.....	3 ss.
Hydr. oxidi rubri,.....	3 ss.

Melt the wax and oil with a gentle heat, and when cool, rub in the red precipitate previously reduced to fine powder.

Hoping the publication of this will be of some advantage to pharmacæutists,

I remain, yours, &c.,

Phila., July, 1860.

FRED. A. KEFFER.

Editorial.

AMERICAN PHARMACEUTICAL ASSOCIATION—NINTH ANNUAL CONVENTION.—Pursuant to adjournment last year, the association convened in New York on Tuesday, September 12th, in the Hall of the University, on Washington Square. The attendance of apothecaries and druggists from all parts of the country was large. We are able to give only a synopsis of its transactions this issue, for which we are indebted to the reports of the daily press, but shall give next month a full report, together with some of the more interesting papers.

The president, Mr. Samuel M. Colcord, of Boston, called the meeting to order, and appointed a committee to receive credentials of the delegates from the different Colleges of Pharmacy. The committee reported that delegates were in attendance from the Massachusetts, New York, Philadelphia, Mary-

land and Cincinnati Colleges of Pharmacy. Mr. Chas. T. Carney, Boston, from the executive committee, reported a large number of names for membership, who were elected. Another list was handed in and laid over till to-day.

The reports of various committees were read by their titles, and laid on the table to be called up at the pleasure of the association.

Mr. Carney read the report of the executive committee, congratulating the association upon its prosperity—referring to the inroads of death in the society's ranks, and wishing future prosperity to the association. The report was received and adopted.

The report of the committee on home adulterations was called for. The report states that the public are utterly unaware of the amount of adulteration in common articles of use and food; and one can scarcely believe it when the facts are presented. The committee recommend that lead pipe should never be used to convey water for drinking purposes, and cited several cases of lead poisoning in consequence. An analysis of a large number of specimens of milk during the past year, showed, with but one exception, great adulterations, not only of water, but of salt, impure milk, and coloring matter. Many of the yeast powders and baking compounds are very unwholesome, and persons cannot be too careful about purchasing such things. The committee state there is great adulteration in liquors, but they think there is a greater error among the people in regard to the use of strychnine in whisky; as in the analysis of many specimens, they found none. In the matter of drugs, opium has been found highly charged with shot. Chloroform has been found much adulterated with alcohol. The report was accepted and adopted. On the motion of Mr. Meakim, of New York, a business committee was appointed to take charge of any recommendations and unfinished business.

The president then delivered a short valedictory address, after which the association adjourned to meet this morning at nine o'clock.

At the meeting on the morning of the second day, forty-two new names were reported for membership, and the executive committee stated that other names had been received, but unaccompanied by vouchers, while some had been objected to by members of the association. At the suggestion of Dr. Squibb, these were held over by the committee to obtain further information respecting them.

The following officers were elected for the ensuing year:—

President—H. T. Kierstead, of New York. *Vice Presidents*—1st. W. J. M. Gordon, Cincinnati; 2d. William S. Thompson, Baltimore; 3d. Theodore Metcalf, Boston. *Recording Secretary*—J. T. Shinn, Philadelphia. *Corresponding Secretary*—P. U. Bedford, New York. *Treasurer*—Henry Haviland, New York. *Executive Committee*—William Procter, Jr., Philadelphia; Charles A. Tufts, Dover, N. H.; James Balmer, Baltimore; George W. Weyman, Pittsburg; James T. Shinn, Philadelphia. *Committee on the progress of Pharmacy*—John M. Maisch, Philadelphia; Edward S. Wayne, Cincinnati; Charles T. Carney, Boston; John Meakim, New York; P. U. Bedford, N. Y.

The president elect not being present, the first vice-president, W. J. M. Gordon then took the chair.

A paper was read by Chas. T. Carney on the substitution of paraffin for wax in serate. He had not had an opportunity of testing by experiment whether any therapeutic objections existed to its use, but had found that it

was available as a substitute for wax, and also spermacetti in the preparation of serates, although the temperature at which parffin solidifies after being melted, and its consequent tendency to granulate, rendered it sometimes objectionable, when both wax and spermacetti were employed. A small quantity of white wax should be used in all cases.

Frekerick Stearns, of Michigan, submitted a paper on alcohol, stating that the Ohio River Valley contributed the largest share of whisky and its derivatives produced in the United States. The amount of whisky which finds a market annually in Cincinnati, is about 500,000 barrels, worth on an average, one year with another, \$5,000,000. An estimate of the total product of whisky in the United States, based upon its production in the several States, and not upon the receipts of the large eastern markets, gives 1,500,000 barrels. The total product of alcohol in the United States is 184,000 barrels, worth over \$7,000,000. Of this quantity one-fourth is manufactured in Cincinnati. The manufacture in that city, has however, fallen off at least one-half since 1858, when it reached its maximum, owing to the foreign demand, which has been nothing since. It is estimated that, until the introduction of illuminating coal oils, by far the largest proportion of the common alcohol produced was employed in the manufacture of burning fluid; since, however, the largest proportion is employed under the name of pure and proof spirit in the manufacture of domestic brandy, gin, &c.

In the remarks that followed upon this paper, a statement was made, which was corroborated by several members, that in making Catawba brandy, instead of its being distilled from Catawba wine, as is generally supposed, the mare, consisting of seed, skins and pulp, is placed in a still with ordinary whisky and distilled, and constitutes the Catawba brandy of commerce. Catawba wine is \$1 50 per gallon, and to produce the brandy from it would cost from \$6 to \$8, while it is offered at from \$2.50 to \$4.00 per gallon.

Papers were read on the preparation of emplastrum assafoetida, by William Procter, Jr.; upon New England carrageen, by Augustus P. Melzar, of Boston; upon the question can the seed of conium maculatum be collected in sufficient quantity for the preparation of conia as an article of commerce, by Henry F. Fish, Waterbury, Conn., in which he affirmed that it could be; on the production of atropia from American ground belladonna root, by William Procter, Jr., of Philadelphia, affirming that belladonna root would yield one-third of one per cent. of atropia.

After taking a recess of three hours, the convention met again at three and a half o'clock in the afternoon.

J. D. Dix exhibited a specimen of genuine Spanish saffron, together with three of the adulterated article. The pure is worth \$12 a pound, and the others from \$3 to \$4. From one of the inferior samples the strength had nearly all been extracted; the second contained from 25 to 30 per cent. of marigold flowers, which had been dyed with saffron; the third was composed entirely of dyed marigold. The genuine is distinguished by the stamens.

being fringed at their extremities, and from their tendency to unite in groups at the base.

A long discussion was had on various amendments to the constitution of the association, which resulted in laying the whole subject on the table. Several papers were then read, one by Edward Parrish, on the preparation of aloin; another by William Precter, on guaiac, which he considered a balsam. Dr. E. R. Squibb, in a paper on etherial oils, affirmed that when diluted with two parts of ether they kept perfectly well.

TREATMENT OF ABORTION, BY EDWARD HALE, M. D., JONESVILLE, MICH.—We have received the above entitled monograph, presenting the causes and consequences, with suggestions and indications for the use of "new remedies" in its treatment.

Dr. Hull is connected, we believe, with the homœopathic school of practice, and has given much attention to investigating the properties of indigenous remedies, and their introduction into that system of practice. He advocates, in the pamphlet before us, the use of a large number in treatment of abortion. That portion devoted to the causes and consequences of this depraved and abominable habit, should be read by every intelligent person, and every effort at its suppression should receive the support of all classes, regardless of the source from whence it may arise.

Those articles to which he specially refers as used with satisfaction, are aletin, asclepin, baptisin, caulophillin, gelseminum, helonin, hydrastin, macrotin, podophyllin, sanguinaria, senecin, trillin, and viburnin. These articles have been used by the medical profession generally, for some time; a new field of employment and usefulness is now opened to them, and in giving such results as may be communicated to us in a future number, it will be for the benefit of those interested in the investigation of all new remedies, without expecting they will meet with the sanction of all, or that we shall be responsible for them, or committed to any system of practice.

MYRZINA AFRICANA—A NEW REMEDY FOR TÆNIA.—At the last stated meeting of the New York Academy of Medicine, I presented a specimen of the *Myrzina African*, from Absynnna, where it is extensively used for the expulsion of tænia lata. I know nothing of the description of the plant; the pulverized seed is the part used, in doses of one-third to one dram, administered in the morning, an hour or two before the usual time for evacuation of the bowels. On the previous evening, beef tea thickened with flour is given, and in one hour after, a full dose of castor oil. The seed must be powdered, and mixed with water. The Academy ordered its reference to the section on *materia medica*, in order that its properties might be tested.

JOHN G. ADAMS, M. D.

Bridgeport, Sept. 25th, 1860.

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Indigenous Tonics.

BY CHARLES A. LEE, M. D.

NUMBER XL

ILLICIIUM FLORIDANUM.

(Starry Anise.) Natural Order, *Magnoliaceæ*; Linnean System, *Polyandria Monogynia*.

BESIDES the magnolia and the liriodendron, the order magnoliaceæ includes another genus, *illicium*, well deserving our attention as a medicinal plant, and ranking among our most palatable indigenous stimulant tonics. Robert Brown and Lindley have included it under the order winteraceæ, regarding the presence of pellucid dots in the leaves as a characteristic mark of distinction between these two orders. These dots, however, exist in all our native magnolias, as well as the exotic species, and may be observed with a lens of very moderate power, if not in the leaves when too coriaceous, at least in the petals. The leaves or petals of all our species of *anonaceæ* are likewise dotted in a similar manner, and it is worthy of note, that they all possess analogous

aromatic and stimulant properties.* The genus *illicium* consists of fine, spicy, flowering shrubs, abounding along the coast which bounds the Gulf of Mexico, extending through Florida and Georgia to the Carolinas. The species *I. floridanum*, so named from its first discovery in Florida, is an evergreen shrub or small tree, with leaves scattered or growing in tufts on short petioles, oval, lanceolate, slightly acuminate, entire, smooth on both sides, and firm or fleshy. The flowers grow on slender, nodding peduncles, an inch or two in length, when fully expanded the size of a dollar, and of a dark purplish crimson. The leaves and young shoots abound in a fine, clear mucilage, which imparts to water a ropy consistence. This mucilage is separated from the decoction by alcohol in the form of dark brown, stringy coagula. The muriate of tin causes a precipitate after these coagula are withdrawn, which would seem to indicate the presence of extract. Sulphate of iron, added to the decoction coagulates the mucus and darkens the color. There are no traces of resin, although the strong aromatic properties indicate the presence of volatile oil. A strong tincture is not disturbed by the addition of water. The bark and leaves are strongly impregnated with a spicy, aromatic taste and smell, resembling some of the pungent seeds, as coriander, anise, &c. This aroma is preserved in the distilled water and fills the room with its fragrance, while distillation is going on. No accurate analysis of this plant has as yet been made. Its active constituents are undoubtedly a peculiar bitter principle, neutral or alkaloid, and a volatile oil, with a small amount of tannic acid.

In regard to its medicinal properties, they are stated, on good authority, to be analogous to those of canella and cascarilla. Some have compared it to sassafras, others to anise; but it differs from these in possessing more tonic virtue. It may be called a mild, aromatic tonic, very acceptable to the stomach, and well adapted to debilitated states of the digestive organs, as atonic dyspepsia, flatulence, diarrhea and dysentery, connected with weakness or

*The rind of the fruit of the *uvaria triloba*, (papaw, custard apple) possesses a very active acid; while the juice of the unripe fruit and the powder of the seeds, are a powerful and efficient vermifuge. The pulp of the fruit is also extensively employed as a topical application to sores and ulcers.

relaxation of the bowels, or in the convalescence from these affections. It would also prove a good addition to other tonics.

The illicium may be used in the form of powder, infusion, tincture or fluid extract. The modes of preparation and doses the same as those of the *asarum canadense*.

The *I. purviflorum*, first discovered by Michaux, in Georgia, so closely resemble the sassafras in taste, as scarcely to be distinguished from it. Both of these species deserve further investigation.

COLLINSONIA CANADENSIS.

Natural Order, *Lamiaceæ*, or *Labiata*, Lindley; Linnean System, *Diandria Monogynia*. (*Rich Weed—Heal All—Ox Balm—Horse Balm—Knot Root—Stone Root—Hardhack—Rich Leaf—Horseweed—Broadleaf Collinsonia*, &c.)

The order *labiatæ* embraces numerous genera and species of herbaceous or suffruticose plants, having quadrangular stems, and opposite branches and leaves, which are studded with vesicles containing an essential oil highly aromatic. These plants abound in temperate climates, and in no instance possess poisonous properties. Most of them are fragrant, and agreeable to the taste, and endowed with decidedly stimulant properties; hence used as stimulants, cordials, carminatives, sudorifics, &c. Some have astringent and tonic properties, while others are used as kitchen herbs for flavoring sauces. The sage, rosemary, lavender, thyme, mint, &c., are familiar representations of this universally recognized order. Their well-known cordial, aromatic and stomachic qualities depend upon a volatile oil, contained in glandular receptacles which abound in the leaves and other herbaceous parts, with which a bitter principle is variously mixed, in some cases, connected with a small proportion of tannin. These latter impart to them a degree of tonic power.*

* Although the order *labiatæ* contains more plants yielding uncombined oil than any other order, yet several of the others secrete them in considerable quantity. Thus the natural order *myrtaceæ* yields the cajuput oil, the oil of cloves, (*caryophyllus aromaticus*) and of allspice, (*eugenia pimenta*; the *aurantiaceæ* yield the oils of lemon, orange and bergamot; the *rutaceæ* present us the oil of rue; the *umbelliferæ* furnish the volatile oils of caraway, anise,

The *collinsonia canadensis*, the only species of the genus found in the northern and eastern States, is a herbaceous plant, with large, broad, cordate, ovate, smooth, opposite leaves; the flowers in terminal panicles of a yellowish violet color. It is found widely disseminated in the United States, though not so abundant at the south; flowering from July to September. The whole plant has a peculiar balsamic smell, which is milder and pleasanter in the flowers than in the root, this having somewhat a rank, disagreeable odor. It has a warm and pungent taste, and yields on distillation an essential oil. The plant grows to the height of two feet, with a perennial, knotty root. The flowers are diandrous, sometimes tetrandrous and monogynous; with a labiate calyx and corolla, the latter of which has the lower lip fringed. No accurate analysis of this plant has yet been made; its most important constituent, however, is known to be a volatile oil. It also contains resin, tannin, gallic acid, starch, gum, sugar, and a peculiar bitter neutral principle, *collinsonin*.

The medicinal virtues of this plant have been pretty extensively tested in domestic, if not the regular practice, and is regarded as tonic, astringent, diaphoretic and diuretic. With some practitioners it ranks very high as an alterative, especially in chronic affections of the genito-urinary organs, as cystitis, or catarrh of the bladder, gravel, leucorrhea, &c. Its wide application in the treatment of diseases, many apparently of a dissimilar kind, has given it the popular name of heal-all. By the Indians it is regarded as a specific for all snake bites, wounds and bruises, while by the common people it is no less esteemed as a remedy for headache, colic and indigestion, while many cases of dropsy have been reported to have been cured by an infusion of the fresh plant, or the root in cider. In New England, especially, this

dill, fennel, &c. We have already seen that volatile oils are extensively found throughout the vegetable kingdom, in combination with resin, called oleo-resin, and these with a peculiar bitter principle, neutral or alkaloid, constitute the active medicinal agents of many roots, woods, barks, leaves, flower and fruit. Though the oleo-resins all operate as powerful excitants, topically upon parts to which they are applied; and also upon particular organs, and the system generally after they are absorbed, yet associated as they often are with a peculiar bitter principle, as in the Virginia snake-root, they exert a decidedly tonic influence.

plant has a high reputation in chronic diseases of the urinary organs, and ascites, though it has been found to irritate the stomach in the form usually administered, viz., the powdered root, which is given in teaspoonful doses. Its influence over the secernent and absorbent systems is strongly marked, hence its demonstrated efficacy as a general alterative, and adapted to all cases where such indication is present. By those who have employed it in such cases, it is believed to be an efficacious tonic in low types of fever, where stimulating tonics are required, invigorating the vital forces in a marked degree. The volatile oil of this plant is more speedily absorbed than most of the articles of this class, hence its more prompt and speedy action as a stimulant. Like all the aromatics it produces an agreeable feeling of warmth in the stomach, increasing the force and frequency of the pulse, and the warmth of the surface, while it diffuses a pleasant glow over the system, without any special influence on the cerebral functions. Its effects seem rather manifested over the organic and sympathetic nervous system, and the capillary circulation.

In addition to its more obvious tonic uses, it may be applied successfully like other aromatics, to relieve spasms, nervous pains, disordered sensations and gastric debility, as well as to remove flatulence, and the colicky pains hence arising. Many practitioners place a good deal of reliance on it in diarrhea and hemorrhoidal affections, while the eclectic school regard it as almost a specific in cholera infantum and affections of the bladder. That it is a remedy of considerable power cannot be doubted, although further researches are necessary to indicate its most appropriate applications. Although we may be unwilling to admit, that its curative power over sores and wounds is such as to entitle it to the name of heal-all, yet we must concede that it possesses no little efficacy in many general diseases. Throughout the middle and western States, there is probably no indigenous plant in more general use as a medicine, or on which greater reliance is placed, and it cannot be supposed that its reputation is wholly without foundation. "In the mountains and hills of Virginia, Kentucky, Tennessee, and Carolina" says Rafinesque, "this genus is considered as a panacea, and used outwardly and inwardly in many disorders; it is applied in poultice and wash for bruises, sores,

blows, falls, wounds, sprains, contusions, and taken like tea for headaches, cholics, cramps, dropsy, indigestion, &c."

The general opinion is that the active principle of this plant is volatile, and that the best mode of administration is the *infusion*, made of the fresh root, in a close vessel, and with a very gentle heat. But it is by no means certain or probable, that its active virtues are all dependent upon this volatile principle, for it is well known that the powdered root soon loses its stimulating properties, when exposed to the air and light for any considerable time. The *fluid extract*, or the *tincture*, made with proof spirit, contains all the active constituents of the plant and entirely reliable: the former being preferable in a majority of cases. The *powdered root* is very apt to cause irritation of the stomach, manifested by nausea and vomiting, and is therefore an objectionable form. The *Callinsonin* of B. Keith & Co., is the bitter and resinoid principle, combined with common salt, in the form of a dark brown powder, resembling macaboy snuff very bitter to the taste and recommended to be used in two grain doses, as a carminative anodyne, and *antis pasmodic*. It seems however to possess scarcely any stimulating properties, and might be employed as a bitter tonic with advantage. The absence of the volatile oil, of course changes very essentially the character of the preparation.

EUONYMUS ATROPURPUREUS.

(Natural Order, *Celastraceæ*; Sexual System, *Pentandria Monogynia*.) Common Names, *Wahoo*, *Burning Bush*, *Spindle Tree*, *Indian Arrow Wood*. The Bark.—*E. Americanus* (*Strawberry Bush*.)

The order *Celastraceæ* of Lindley, is composed of small trees or shrubs, found in the warm parts of Europe, Asia, Africa and North America, though chiefly extra-tropical. The general character of the order is acidity, dependent upon a volatile oil. Besides the *Euonymus*, it includes the *Celastrus Scandens*, or Bitter Sweet so extensively employed in domestic practice as an alterative, diuretic, and cholagogue; considered by the Thompsonians almost as a specific in removing hepatic obstructions, and anti-syphilitic.

The *E. Atropurpureus*, or wahoo, is a small shrub or bush,

growing in woods or thickets, in many parts of the United States. The bark of the root, which has a bitter and somewhat unpleasant taste, is the officinal portion. This production, now cultivated as an ornamental shrub, grows from six to fourteen feet high, and is well known in autumn from its copious crimson fruit, drooping on long peduncles. Its petioled leaves, are oval-oblong, pointed, and parts of the dark purple flower commonly in fours; pods smooth, deeply lobed. The *Euonymus* derives its name from two Greek words, signifying *good* and *name*, because it has the bad reputation of poisoning cattle. *Tourn*, (" *Lucus, a non lucendo.*")—

The *wahoo* has not yet been accurately analyzed; it is however known to contain a neutral bitter principle, *Euonymus*, with some resin, starch, gum, sugar, &c. The medical properties, as a laxative, tonic and alterative, have been sufficiently established by its use in domestic practice, as to entitle it to a place among the more important remedies of this class. We have known it used as a general alterative in quite a number of cases of chronic diseases, as cutaneous affections, secondary syphilis, torpidity of the liver, with debility of the digestive functions, and with very favorable results. It possesses some antiperiodic power as a tonic and will prove successful in intermittents of a mild grade. In over doses, it acts as a drastic cathartic, attended with some griping pain, and prostration: the discharges being sero-mucous, mixed with bile. It is used, also, by the Eclectics as an expectorant in affections of the respiratory organs, and is said to prove useful in cases of asthma, and dropsy after the effusions have been removed. There can be no doubt that it is a useful laxative tonic, promoting the bilious functions and intestinal secretions, and the capillary circulation generally. Its application to particular forms of disease, must be left to the judgment of the practitioner; the most that can be done or that our limits allow, is to point out the physiological action of remedies, and the indications they are calculated to fulfill.

Preparations of the *wahoo* are now kept in the shops, from our large drug-manufacturing establishments, and the practitioner will find it to his advantage to obtain them, rather than rely upon domestic pharmacy. Of these the *fluid extract*, *tincture* and *syrup*, are the only ones ever necessary to employ, selecting ac-

cording to the circumstances of each individual case. The dose of the fluid extract is from one to two drams. The *tincture* may be made by adding four ounces of the fluid extract to twelve ounces of diluted alcohol, of which the dose is from half to one ounce. The *Syrup* is made by adding two drams of the fluid extract to one pint of syrup, of which one to two ounces is a dose. This preparation is well adapted to children, and has proved very servicable in scrofulous affections. The *Eüonymin* of B. Keith is an extremely bitter dark brown colored powder, slightly saline to the taste, and seems to be the powdered alcoholic extract, mixed with some vegetable powder and common salt.—Dose, as a laxative and tonic, from one to two grains, as an expectorant, one-fourth to one grain.

Asclepias Tuberosa in Pleuritis Peritonitis.

By C. G. POLK, M. D., of Frederica, Del.

AMONG the many indigenous medicinal agents that have attracted the attention of the medical profession there is none possessed of more value in the cure of disease than *Asclepias Tuberosa*. While its diaphoretic powers are equaled by but few of that class of agents which promote the action of the skin and induce perspiration it is also endowed with unexcelled alterative influence upon serous membranes, doubtlessly subduing *Pleuritis*—which, if treated by other means would have terminated fatally. An agent possessed of so great curative powers in so severe and often fatal diseases merits a much higher place in the *materia medica* than has ever been given it, and to call the attention of the profession to its value I now offer a few cases from practice illustrative of its efficacy—believing that thereby a more correct idea may be formed of the merit of the agent than could be gleaned from a long didactic essay upon its therapeutical action. A true inference, I think, can be drawn from the following cases as to the value of *Asclepias* in my hands.

Case 1.—An Irishman of a very robust constitution, aged 32, exceedingly plethoric, had ever enjoyed uninterrupted good health since his recollection—occupation, a sailor. After being exposed

several days to inclement weather was attacked with a severe rigor and intense pain in the right side extending over the right hypochondrium, tongue coated with a thick yellow fur, pulse numbering 105 beats per minute, very strong, tense and resisting, breathing hurried and difficult—skin very hot and dry. Adopted the following treatment, Feb. 4, 1858. Depletion from the arm until the pulse began to fail. Gave a cathartic of Calomel 10 grains, Comp. Ext. Colocynth 10 grains, and at bed time 10 grains of Dovers Powder.

Feb. 5th.—The bowels have been acted upon, yet the disease still continues unabated; pulse 100 strong and resisting, skin intensely hot, violent headache and intense pain in the side. Prescribed the following mixture:

R Fluid Ext. Asclepias (Tilden's)	- - -	℥ iij.
Aconitia	- - -	gr. j.

Take a teaspoonful every two hours alternated in the intermediate hour by the following:

Fluid Ext. Asclepias	- - - - -	℥ j.
Veratrum	- - - - -	gtt. xx.

Take a teaspoonful at a dose. Apply cold water in cloths to the seat of the pain.

Feb. 5, evening.—Pulse 50 beats per minute, pain nearly gone, patient faint, has a peculiar oppressive sensation in the cardiac region and tingling along the extremities. Breathes with but little difficulty, skin cold—is evidently under the influence of aconite. Ordered two drams of the fluid extract asclepias to be given at bed time and 10 grains Dovers Powder, discontinuing other medicines.

Feb. 6.—Found the patient covered with profuse perspiration, quite easy, pulse 65 beats per minute, bowels regular and natural—there seems to be a slight tendency to effusion in the pleural cavity—to obviate which gave the following every three hours:

Pulv. Squill	- - - - -	gr. j.
Pulv. Digitalis	- - - - -	gr. ss.
Blue Pill	- - - - -	grs. ij. Make into

a pill and take.

Alternated by the following mixture:

Fl. Ext. Asclepias	- - - - -	℥ j.
Spt. Nit. Ether	- - - - -	℥ ij.

Take a teaspoonful every hour.

Feb. 7.—Further attendance unnecessary. Discharged with direction to take 20 drops of Spt. Nit. Ether every two hours for

two or three days. The above case I regard as exhibiting in a marked degree, the great power of *Asclepias*. True, my treatment was inefficient previous to resorting to that agent in not administering a sedative to control the circulation after depletion, yet I cannot believe that I could have saved this patient's life without giving the *Asclepias*, in which opinion my friend, Dr. H. M. Faust, coincided.

Case 2.—Feb. 6, 1858.—(So much like the above that a careful description unnecessary. It was equally as sthenic in its type.) I treated this case thus:

R. Prlv. Lobelia Seed	- - - - -	grs. xv.
Wa: m water	- - - - -	℥ iij.

Take a teaspoonful every five minutes until the patient's stomach becomes nauseated, then double the internal until emesis ensues. Take, after the effects of the emetic have passed, the following powder:

Calomel	- - - - -	15 grains.
Podophyllin	- - - - -	1 grain.

Then begin the sedative treatment by giving a teaspoonful every hour of the following compound:

R. Fluid Ext. Aconite Root	- - -	gtts. xxx.
Fluid Ext. Veratrum	- - -	gtts. x xxv.
Fluid Ext. Lobelia	- - -	3 ij.
Fluid Ext. <i>Asclepias</i>	- - -	℥ ijsa.

Apply cloths wrung out in cold water to the chest.

Feb. 7.—Case seems progressing favorably—pulse reduced to 60 beats per minute, skin bathed in profuse perspiration, pain very slight, breathing nearly normal. Prescribed the compound of yesterday, extending the intermission between the doses to three hours, giving midway between the doses, the following powder:

R. Calomel	- - - - -	1-12 grain.
Pulv. Squill	- - - - -	gr. j.
Camphor	- - - - -	grs. ij.
<i>Asclepidin</i>	- - - - -	grs. iij.

Feb. 8.—The patient improving fast. Ordered a teaspoonful of the Fluid Extract *Asclepias* every two hours for a day or two, decreasing the dose gradually. The above cases run a much shorter course than those treated by the usual mode, all formidable symptoms being subdued in a few hours, and the convalescence much shorter. The following case, treated in the ordinary manner, exhibits the great superiority of the new mode of treatment over the old. This is more evident to one who saw the two very

severe cases yield more readily to the *Asclepias* than the milder to depletion, mercury, tartar emetic, et cetera.

Pleuritis.—Male, aged 26, constitution average, symptoms quite active and well marked.

May 2, 1859.—For want of the remedies employed in the former cases, I instituted the following treatment:

Depletion till pain ceased.	
Cathartic of Calomel and Jalap	- - - 10 grs. each.
Dovers Powder	- - - 10 grs.

May 3.—Found the patient with the pain slight, pulse 88, considerable fever and slight headache. Prescribed 1-6 grains tartar emetic every hour; applied sinapisms to the chest; at bedtime gave the following powder:

R. Calomel	- - - - -	grs. iij.
Pulv. Ipecac	- - - - -	grs. j.
Pulv. Opium	- - - - -	gr. 1-2 gr.
Camphor	- - - - -	grs. ij.

Mix and take.

May 4.—Symptoms less active; applied a blister; gave the following powder to remove a slight effusion in the plural cavity:

R. Calomel	- - - - -	grs. ij.
Pulv. Squill	- - - - -	gr. j.
Pulv. Digitalis	- - - - -	gr. 1-2

Mix and take every three hours, and give in one of the alternate hours two drams of of Spt. Mindererus.

May 5.—Symptoms still abating; some effusion remaining; give Bi. Tart. Potassa in half dram doses every two hours, alternating with

Pulv. Squill	- - - - -	1-2 gr.
Pulv. Digitalis	- - - - -	1-4 gr.
Calomel	- - - - -	1-8 gr.

May 6.—The patient is under the influence of mercury; gums quite sore. Discontinued the medicine of the previous day and give 20 drops of sweet Spts. of Nitre every two hours.

May 7.—The patient requires no further treatment.

Upon comparison of the first two cases with the last, a marked difference is exhibited in the result of the two different plans of treatment, and so much in favor of the former, that in the treatment of *Pleuritis*, I seldom resort to any other.

I have treated about sixty cases without the loss of a single patient. I have also used *Asclepias* and *Aconite* in *Peritonitis*, and found these agents, combined with *Morphia*, sufficiently potent to control this very severe disease in a few days, and recom-

mend them to the profession as agents of unexcelled efficacy. The fluid extract of Aconite Root and Asclepias Tuberosa, prepared by Tilden, is the form I prefer above all others, and can recommend this form of them with perfect confidence. I regard the Asclepidin inferior to the fluid extract, and regard the alcoholic extract next in value to the fluid form.

The description of the above cases and their treatment is *verbatim* from my note book, and written at the time I was attending them.

THE PHARMACEUTICAL ASSOCIATION.

NINTH ANNUAL CONVENTION.

The American Pharmaceutical Association commenced the sessions of its Ninth Annual Convention, on the afternoon of Tuesday, Sept. 11, at 3 o'clock, in the Hall of the University Building, on Washington Square.

The meeting was called to order by Samuel M. Colcord, of Boston, the President of the Association. He said :

Gentlemen, the time has arrived when we may come to order, and I think the preliminary business is so arranged as to take up but little time. The first business is the appointment of a committee of three persons, to examine credentials and register and report the names of those duly accredited. I will appoint on that committee, Messrs J. M. Maisch, of Philadelphia ; Isaac Codrington, of New York, and W. J. M. Gordon, of Cincinnati.

This committee was nominated by vote and in a few minutes presented their report.

The following are the names of delegates from different colleges of Pharmacy :

From the Massachusetts College of Pharmacy.

Thomas Restieaux,	Charles T. Carney,	Thomas Hollis,
John Buck,	Eben R. Blatchford.	

From the N. Y. College of Pharmacy.

H. T. Kiersted,	William Hegeman,	Geo. D. Coggeshall,
John Milhau,	Thomas T. Green.	

From the Philadelphia College of Pharmacy.

John M. Maisch,	Charles Shivers,	Wm. R. Warner,
James T. Shinn,	Geo. J. Scattergood.	

From the Maryland College of Pharmacy.

John Block,	Jos. Roberts,	J. F. Moore,
James Balmer,	Louis Dohme.	

From the Cincinnati College of Pharmacy.

Wm. J. M. Gordon, Chas. A. Junghanns, C. A. Smith,
E. S. Wayne, J. C. Parr.

The President next called for the report of Executive Committee on new members of the Association.

Mr. Charles T. Carney, of Boston, the Chairman of the Executive Committee, read a list of candidates for membership. He said the committee were not personally acquainted with each candidate proposed, but they presume that the several delegations from the colleges of Pharmacy could vouch for them.

Mr. John Meakim moved that the committee be allowed until Wednesday morning to examine the list of names, and see that every one was properly endorsed by some member, as eligible, according to the terms of the constitution.

Mr. Carney said the committee had taken pains to ascertain the endorsements of all those names they had received previous to the opening of the meeting, but those proposed since were almost entire strangers, to him at least.

Prof. William Proctor, Jr., said it had been usual for the executive committee to report those names handed in during the recess of the meeting, to be ballotted for separately; but he understood that this class of applicants was now mixed with those proposed in the present meeting.

The President explained that this was not the case, as there was a separate list of candidates proposed during the recess, which would be read and decided upon as the next business in order.

Mr. Meakim's motion was put to vote and carried.

Mr. Carney next read the list of persons whose applications for membership had been approved by the committee.

The President said it had been usual to vote to declare the names elected at once.

Prof. Procter said, a very usual plan was to ballot for the whole in a mass and if there were indications that there were more than one-third of the votes on the black ball, then it was certain that some one present was certain that some one was objected to: and then it was necessary to separate the ballots.

The President proposed that the members write yes or no on pieces of paper, thus voting for or against the whole list. It would be the shortest way to get through with the business.

Mr. Henry F. Fish of Waterbury, Conn., said that there was one party reported by the committee to whom he should object.

The President suggested that all names objected to by the members, be set over to be decided upon with the list to be presented Wednesday morning.

The list being corrected in this way, a vote was taken in the manner mentioned by the President.

Messrs. Coddington and Joseph Laidley, of Richmond, Va., were appointed tellers. The vote stood, 54 yes, 1 no, and 4 blank. Those on the list were members, and were invited to step forward and sign the constitution.

Mr. Carney read the names of persons who had signed the constitution, and been constituted members by the executive committee since the last session. They are as follows :

Thomas Kinghorn, Brooklyn, N. Y.
 Albert J. Congden, E. Greenwich, R. I.
 George J. Scattergood, Philadelphia.
 William Evans, Jr., do
 Joseph L. Moffat, Roxbury, Mass.
 W. Prior Creecy, Vicksburgh, Miss.
 Francis L. Gaither, Washington, D. C.
 J. B. Moore, Danville.

The roll of members were then called, and the following members marked present :

Henry F. Fish, Conn.
 William Proctor, Jr., Philadelphia.
 T. S. Wiegand, do
 P. W. Bedford, New York.
 James S. Shinn, Philadelphia.
 W. J. M. Gordon, Cincinnati.
 Thomas Resticaux, Boston.
 Chas. A. Tufts, Dover, N. H.
 Joseph Laidley, Richmond, Va.
 T. A. Lancaster, Philadelphia.
 James Stratton, N. J.
 George W. Weyman, Pittsburgh,
 Harman Scully, do
 Joseph L. Lemberger, Lebanon, Pa.
 T. R. Spence, Detroit, Mich.
 James Balmer, Baltimore.
 Lewis T. Silliman, Columbia, S. C.
 H. Warner, Boston.
 Edmund Dana, Jr., Portland, Me.
 James T. King, New York.
 H. M. Whitney, Mass.
 John Thompson, Sumpter, S. C.
 John Black, Baltimore,
 John Buck, Chelsea, Mass.
 John Canavan, New York.
 William Neergard, New York.
 Joseph H. Thatcher, Portsmouth, N. H.
 H. T. Kierstead, New York.
 Thomas T. Green, do
 John Faber, do
 W. A. Galatly, do
 E. R. Squibb, do
 N. S. Harlow, Bangor, Me.
 H. A. Tilden, New Lebanon, N. Y.
 F. F. Mayer, N. Y.
 G. M. Clark, Boston,
 J. W. Shedden, New York.
 O. D. G. Dort, Geene, N. H.
 S. M. Colcord, Boston.
 A. Bagden, do
 G. C. Close, Brooklyn.

William Evans, Jr., Philadelphia.
G. J. Scattergood, do
H. Haviland, New York.
Geo. W. Berrian, N. Andover, Mass.
C. T. Carney, Boston.
Wm. M. Giles, New York.
J. H. Currie, do
J. M. Maisch, Philadelphia.
I. Coddington, New York.
F. Hale, do
J. Meakim, do
W. B. Little, M. D., San Francisco.
B. J. Crew, Philadelphia.
C. Bullock, do
O. A. Junghanns, Cincinnati.
John Milhau, New York.
E. Dupuy, do
T. W. Metcalf, Williamsburgh.
Levi Tower, Jr., Boston, Mass.
William R. Warner, Philadelphia.
A. H. Wilson, do
R. J. Davis, Brooklyn.
W. H. Pile, M. D., Philadelphia.
W. S. McConville, Worcester, Mass.
R. J. Taylor, Newport, R. I.
H. D. Scully, Pittsburgh, Pa.

The President called for the report of the Standing and Special Committees to be read by their titles or in full, and laid on the table for further consideration. Mr. Carney presented the report of the executive committee.

Mr. Parrish, the Chairman of the Committee on the Progress of Pharmacy, was not present, but the President said he would probably be there the next day, and had requested that his report be mentioned as ready, and lie on the table.

Mr. Carney presented the report of committee on Home Adulterations.

The Chairman of the Committee on Act of Incorporation, was not present and no member of it knew of the existence of any report.

The President said the next business was to appoint a committee to nominate officers for the ensuing year, consisting of one nominated by each delegation in attendance, and three members appointed by the President from among those not delegated to report at the opening of the next session.

The following are the names reported: Thomas Restieaux, from the Massachusetts Delegation; Thomas T. Green, from the New York Delegation; John M. Maisch, from the Philadelphia Delegation; John Block, from the Maryland Delegation; Wm. J. M. Gordon, from the Cincinnati Delegation. The following persons were added to the Committee by the President: William Procter, Jr., Philadelphia, E. R. Squibb, Brooklyn, C. A. Tufts, Dover, New Hampshire.

Mr. Carney, on invitation, then read the report of the executive committee.

Dr. Squibb moved that the report be accepted. He next moved that it be adopted. Both motions carried.

Mr. Fish moved a re-consideration of the last vote, as he understood that the resolution contained in the report was adopted with it, and he would like to make some remarks upon it. [The resolution required all papers intended to be included in the proceedings to be completed and laid before the Association prior to its adjournment.—ED. REPORTER.]

Dr. Squibb seconded the motion.

Mr. Fish said he had no idea of detaining the Association a moment unnecessarily, but the effect of that resolution was to exclude any report which was not presented to this meeting and acted upon by it, and as there were many papers which it was impossible to finish up immediately, he would suggest to the executive committee to modify the resolution so as to grant a person a few days to finish his report when he had not done so already. The resolution rejected a report entirely if it was not presented.

Mr. Carney said that there was a provision in the resolution that a short delay could be granted to a member by vote of the Association. It might be made to read, if it would better accord with Mr. Fish's view, that delay could be granted by the executive committee.

Dr. Squibb said it was well known that after the adjournment of the Convention, the executive committee rarely got together; and they could only take into consideration such a proposition by writing to one another, as they never live in the same city; and this would cause great trouble and delay in the publishing of the proceedings of the Association. He therefore preferred the original resolution as it stood.

Prof. Proctor said that it seemed to him that when the subject was read, and the question was asked whether the paper to be presented was ready, if the author could not answer in the affirmative there would be time enough for him to request time of the Association to prepare his paper.

Mr. James Stratton, of Bordentown, N. J., moved to adopt the original resolution as it stood. Motion carried.

The committee on nominations were requested to remain in the room at the close of the meeting.

The President asked if it was the wish of the Association to hear the report of the committee on Home Adulterations. The desire being expressed, Mr. Carney, the chairman of the committee, read it.

The report excited much interest; and Mr. Tufts of Dover, N. H. moved its acceptance and adoption, which motion was carried.

Mr. Meakim, at the previous suggestion of the President, offered the following resolution :

Resolved, That a business committee be appointed to take charge of any recommendation in the report of the committees, and of unfinished business, and to offer suitable resolutions for the action of the Association.

The resolution being adopted, the President named on the committee, Messrs. Squibb, Carney, and Proctor.

As the last business of the session, the President read his annual report, which was received with applause; after which the meeting adjourned until Wednesday morning at 9 o'clock.

WEDNESDAY MORNING SESSION.

The meeting was called to order on Wednesday morning at 9 o'clock, by Mr. Colcord. The attendance was very full. The minutes of the Secretary of the minutes of the previous day were read and accepted. The following members registered their names as present at the Convention in addition to those present on Tuesday:

H. H. Burrington, Providence R. I.
J. M. Clark, Georgia.
J. Jackson, Knoxville.
F. L. John, Philadelphia.
J. G. Wilbur, Boston.
O. B. Guthrie, Tenn.
C. L. Case, Brandon, Vt.
John Carle, Jr., New York.
W. B. Gardiner, New York.

E. Parrish, Philadelphia.
J. C. Cook, Maine.
B. J. Stacey, Mass.
C. G. Eggert, Philadelphia.
O. F. G. Collins, Wis.
S. K. Norgrave, Pittsburgh.
E. E. Knapp, Norwalk, Conn.
Paul Balluff, Brooklyn.
W. E. P. Baylis, Brooklyn.

Wm. J. Watson, New York.

The Executive Committee reported the following named persons for membership:

O. F. Cawthon, Mobile, Alabama.
Peter D. Leys, Brooklyn, N. Y.
Richard Forester, do.
Samuel J. Billings, New York.
W. E. P. Baylis, Brooklyn, N. Y.
John Lyman, Chelsea, Mass.
James E. McDaniel, Baltimore.
John McDonald, Brooklyn, N. Y.
C. H. Dalrymple, Morristown, N. J.
William J. Watson, New York.
John Carle, Jr., do.
E. E. Knapp, Norwalk, Ct.
Samuel G. Welling, New Rochelle, N. Y.
John H. Pope, New Orleans.
James Weaver, New York.
William J. Darbey, New York.
James E. Cunningham, Pittsburgh, Pa.
Theodore Moltz, Fishkill, N. Y.
Paul Balluff, Brooklyn.
G. G. Potter, New York.
William Ball, do.

O. F. J. Meyer, Fort Wayne, Ind.
S. S. Hubbard, Brooklyn, N. Y.
George C. Leys, do.
Benjamin F. Stacey, Charleston, Mass.
E. L. Johnson, New York.
Edmund Bigelow, Springfield, Mass.
J. A. Wolf, Penn.
Arthur Lelitch, St. Louis.
C. M. Wheldon, Pittsfield, Mass.
William M. Gileb, New York.
Isaac M. Sands, do.
Jabez H. Hazard, New York.
William E. Hagan, Troy, N. Y.
George W. Southwick, New York.
Richard J. Owens, Brooklyn, N. Y.
William G. Stephens, Yonkers, N. Y.
H. M. Pettit, Pittsburgh, Pa.
Theodore Schumann, New York.
Otto Lalst, New York.
G. E. Shells, do.
Henry Bower, Philadelphia.

A ballot was ordered, the same tellers acting as yesterday, who reported the election of all the above named persons.

Mr. Carney said he had another list of names besides those just elected, some of which had been objected to by members of the Association, and others for whom the committee had received no vouchers; or if vouchers were handed in they were mislaid. The committee did not report against them, but would place them before the Association.

The President—I understand you that you separate them so as to take separate ballots on them.

Mr. Carney—Yes, sir.

Mr. Squibb—I would enquire whether it would not be better not to read those names. It will do no good to read the names of those objected to. The executive committee have full power in the matter, and I think it would be

better to let those names remain with the committee until they receive vouchers for them.

Mr. Carney—The executive committee do not object to them, but they have not felt like taking the responsibility of recommending them without vouchers, and have thought better to submit them to the Association.

Mr. Squibb—I think it would be better not to read the names, but let them lie with the committee until vouched for. It is not expected that the committee should hunt up recommendations, but it is the duty of those who proposed the persons to come forward and vouch for them.

In accordance with Dr. Squibb's suggestion, the names were allowed to remain with the executive committee without reading.

The Committee on the nomination of officers for the ensuing year reported as follows :

President—H. T. Kierstead, of New York.

Vice Presidents—1st, W. J. M. Gordon, Cincinnati; 2d, Wm. Thompson, Baltimore; 3d, Theodore Metcalf, Boston.

Recording Secretary—James T. Shinn, Philadelphia.

Corresponding Secretary—P. Wendover Bedford, New York.

Treasurer—Ashel Boyden, Boston,

Executive Committee.—William Procter, Jr., Philadelphia; Charles A. Tufts, Dover, N. H.; J. Balmer, Baltimore; George W. Weyman, Pittsburgh, Pa.; James T. Shinn, Philadelphia.

Committee on the Progress of Pharmacy—John M. Maisch, Philadelphia; Charles T. Carney, Boston; Edward S. Wayne, Cincinnati; John Meakim, N. Y.; P. W. Bedford, N. Y.

Mr. Ashel Boyden, the Treasurer, said: I thank you gentlemen, for the honor tendered me by electing me again for the office of Treasurer; but my business and health are such that I shall be under the necessity of resigning it for another season.

The President—Mr. Boyden, is that positive?

Mr. Boyden—Yes, sir, it is positive. I should be happy to continue but my business and health will not permit.

Mr. Procter—I should be exceedingly glad if Mr. Boyden would serve another term, but at the same time it is not right to insist on it if it interferes with his business. Could not he serve one year more?

Mr. Boyden said that for the reasons stated he was compelled to decline decidedly.

Mr. Stratton moved that the resignation be accepted. Motion carried.

The office of Treasurer was referred back to the nominating committee.

That committee reported in place of Mr. Boyden the name of Henry Haviland, New York.

The Association then proceeded to the election of President by ballot, Messrs. Laidley, Meakim and Coddington acting as tellers. The vote stood—Kierstead, 38; Meakim, 1; yes, 1; blank, 1.

Mr. Meakim said he desired to withdraw his strong opposition to the popular man and to add it in his favor.

The vote for Vice Presidents stood—Gordon, 34; Thompson, 39; Metcalf, 36; Carney 1.

There were only three votes against any one nominee.

Mr. Parrish moved that the President be requested to deposit a ballot for the remaining officers not elected. Motion carried.

The President deposited his vote for the remaining officers on the ticket proposed by the nominating committee, and they were declared elected.

Mr. Kierstead, the President elect, not being present, W. J. M. Gordon, the first Vice President, was requested to take the chair.

Mr. Colcord retired from the President's seat, and Mr. Gordon took that position amid applause.

Mr. Gordon said :—Gentleman, in assuming the duty of the Chair, I shall not attempt to make any remarks to you. I shall leave that to the President when he makes his appearance, the meeting is now ready for any business that is before it.

Mr. Meakim offered the following resolution :

Resolved, that invitations be extended to the following persons to be present at our meetings :

Dr. Edward Delafield, President of the College of Physicians and Surgeons.

Dr. J. W. Draper, President of the Medical Faculty of the University of New York.

The Honorary Members of the Association.

The Professors and ex-Professors of the College of Pharmacy of the city of New York.

Dr. Squibb wished to make a suggestion to Mr. Meakim to include the following :

The Fellows of the Academy of Medicine; the members of the Pathological Society and of the New York Medical Society.

Mr. Meakim made these additions, and his resolution was adopted.

Mr. T. L. Wiegand offered the following which was adopted :

Resolved, That the thanks of this Association be tendered to the President and the other active officers of this Association for the able manner in which they have discharged their duties during the past year.

On motion of Mr. Colcord, the treasurer then read his report, as follows :

TREASURER'S REPORT FOR 1859-60.

To the American Pharmaceutical Association:

Your Treasurer in reporting upon the financial condition of the Association has the satisfaction of showing a small balance in the Treasury, although fears were expressed at the close of the last meeting that a contribution would be asked in order to meet the increased demand for publishing nearly double the amount of matter of any former year, and from the fact that a portion of the past years' receipts were used to defray a portion of the former years expenses, but owing to the very economical management of your Executive Committee for the fiscal year just closed, no such contribution was asked for, the credit obtained of the printers and about \$200.00 borrowed being sufficient to meet the exigency, which I am happy to say is already liquidated by the response of members to the Treasurer's circular.

The volume of proceedings would make a much better appearance in larger type with more expense upon its publication, and it is probable that in future years so much economy will not be required. If we have our usual success, and increase of members the coming year, we can safely calculate our income

at from \$1,200, as follows:

Dues not paid for the year 1855.....	\$32,00
“ “ 1856.....	40,00
“ “ 1857.....	68,00
“ “ 1858.....	138,00
“ “ 1859.....	356,00
“ “ 1860.....	550,00
Estimate 100 members.....	200,00
“ certificates.....	150,00
“ proceedings sold.....	300,00
.....	<u>\$1834,00</u>
Deducting the amount of dues of 55, 56, 57, 58, 59.....	<u>\$637,00</u>
(In round figures.).....	<u>\$1200,00</u>
As an amount exceeding any income not likely to come in, we shall have \$1200,00 as the least probable income for the ensuing year.	
The net statement of the account will furnish you with the receipts and disbursements of my Treasury account, to Sept. 8, 1860, with vouchers accompanying, duly approved. Some omissions in the published roll of members have occurred which I carefully endeavored to correct on the books of the Association; and the Index to the Ledger will now furnish a correct alphabetical roll which together with a carefully credited list of members by the Executive Committee will furnish a complete list.	
American Pharmaceutical Association, in account with Ashel Boyden, Treasurer:	
	Dr.
Rand & Avery's bill of printing and binding Proceedings, &c.....	\$934,39
Selling certificates.....	40,23
Sundry expenses as per Ledger.....	74,02
Balance of Cash on hand.....	80,89
.....	<u>1129,80</u>
	Cr.
Cash received of former Treasurer.....	\$231,13
Contributions from Members, per Ledger.....	554,00
Cash received for Certificates.....	126,00
“ “ “ Proceedings sold.....	218,69
.....	<u>1129,82</u>
Add error in addition.....	,50
.....	<u>\$1303,21</u>
ASHEL BOYDEN, Treasurer.	

Mr. Stratton moved that the report be adopted and referred to a committee to audit

Messrs. Squibb, Restieaux and Junghanns were appointed by the chair to act on that committee.

M. Colcord called for the report of the committee on the progress of pharmacy.

This report was a voluminous document of about eighty foolscap pages and Mr. Parrish the chairman of the committee read extracts from it at some length, reserving the rest for publication. He remarked however, that, as it would take up such a large space portions of it might be printed in small type, not to give it undue importance in the proceedings of the Association.

Mr. Colcord moved that the report be accepted and referred to the Execut-

ive Committee with full power.

Mr. C. B. Guthrie asked if this had been the usual custom. It was his impression that the Association generally accepted such reports and ultimately took them up to receive such comments as might be made by members.

Mr. Colcord said that now was the time to make such comments.

Mr. Guthrie said that perhaps many who might wish to discuss it were not present now, and to establish a rule that a paper must be discussed just when it was read would compel those who wished to do so, to be there just at the time which was impracticable. Some hour should be set for its discussion. It was a report worthy of consideration, and might receive a better indorsement by being talked about in the Convention.

This suggestion was not acted upon and Mr. Colcord's motion prevailed.

John M. Maisch presented to the Association, several copies of a Swiss Pharmaceutical Journal. As this Journal together with others for some years had been forwarded by a Philadelphia firm without the least expense, he offered the following which was adopted:

Resolved, That the American Pharmaceutical Association acknowledge their obligations to Messrs. Schaiffer & Koradi, Philadelphia, for gratuitously forwarding their exchanges from Germany for several years past.

Mr. Procter offered the following which was adopted.

Resolved, That a committee be appointed to prepare a list of questions for investigation during the ensuing year.

The chair named the following gentleman on that committee: Wm. Procter, Jr., Dr. E. R. Squibb, T. S. Wiegand, Fred. L. John, and Charles A. Tufts.

Dr. Squibb begged to be excused from the auditing committee as he was on several other committees. Mr. T. T. Green was appointed in his place.

Mr. George W. Weyman offered the following:

Resolved, That a committee of five be appointed to examine the Drugs and Chemicals, and other articles offered on exhibition to the Association, and report at a future sitting of the Convention.

Geo. W. Weyman, C. T. Carney, S. M. Colcord, John Canavan and John Meakin were named by the chair on that committee.

Mr. Procter called the attention of the meeting to the resolution adopted last year, "That it would greatly keep up the interest of the sessions if it be determined to make the reading of scientific papers proceed parallel with the other business." He said that if the reading of the papers were deferred to the later sessions many of the members would be gone, and he suggested that they be proceeded with at once.

The Secretary at the desire of the meeting, preceeded to call for the answers of queries proposed and accepted last year.

On motion of Dr. Squibb, the reading of scientific papers was proceeded with.

Query No. 1 Relative to "Indigenous Vesicating Agents," was not replied to.

Query No. 2. Relative to Citric Acid, was answered by Charles T. Carney, to whom it had been referred.

Query No. 3. Relative of Aconitia, received no answer; Prof. Graham, to whom it was referred, having retired from Pharmaceutical pursuits.

Query No. 4. On the subject of the Production of Alcohol, was answered at a later hour of this sitting by F. Stearns, who had not arrived at this time.

Query No. 5. On the subject of the Varieties of Garlic being called up, Prof. Proctor informed the meeting that Dr. Thomas had engaged in the preparation of a paper in answer to the query, but that it had not come to hand. It was resolved that Dr. Thomas's paper on Garlic, when received, be referred to the Executive Committee for publication in the Proceedings.

Query 6. On Aloin, referred to Edward Parrish, was ready, but not present, and was referred to a future sitting.

Query 7. On Sulphate of Ammonia, was read by Charles Bullock.

Query 8. Relative to Chamomile Flowers, was not answered.

Query 9. On Arnica Flowers, received no reply.

Query 10. On Assafetida Plaster, was read by William Proctor, Jr., and referred for publication.

Query 11. On Atropia, from American Belladonna, was read by the same gentleman, and referred.

Query 12. Mr. Carney informed the Association that Mr. Melvin had not replied to this query from his inability to procure the Japanese wax.

Query 13. On the employment of Paraffine in Pharmacy, was answered by Charles T. Carney.

Query 14. On the Carrageen production of New England, was answered by a paper from Mr. Melzar, which was referred.

Query 15. Relative to Conium Seeds, was answered by Henry F. Fish.

Query 16. On Saffron, and query 17 on Cubebs, and query 18 on Digitalin, were not answered when called for.

Mr. Frederick Stearns, being now present, was invited to read his paper on the fourth subject, which was as follows:

"The subject of Alcohol in the United States, viewed in reference to its manufacture from various sources, its commerce, its impurities, adulterations, and test of purity; and all the statistics of its commercial relations."

Mr. Stearns read a short paper giving a general view of the subject.

Mr. Parrish said he thought it would be an improvement if these papers that were being read were a little discussed. There were, no doubt, a great many present who had ideas, and a little experience of their own, about these matters; and he would be glad to speak on some of them himself. They got sleepy there, sitting all the morning simply listening to these papers.—He continued: I was thinking when our friend here was reading this paper on alcohol, that some one might be acquainted with the subject, and would like to make some remarks. Our friend does not mention an article which the liquor dealers call sweet spirit, one of the productions much used as one of the derivatives of whiskey. I have only recently become acquainted with the merits of sweet spirits, (laughter.) I think it is a great deal better form of alcohol, for a great many purposes in which we employ alcohol, than

the rectified spirit, which is often one-half water—or diluted alcohol. The liquor dealers do not like to sell this sweet spirit; it is a new thing, and seems to be a kind of a monopoly of theirs. They keep it quiet, so that the people hear very little of it; it is only very lately that I heard of it. I do not know but we are a little more ignorant about it than we ought to be—until recently I was unacquainted with its existence. I don't know what the experience of others may be.

Mr. Carney—Is that sweet spirit the article otherwise known as deodorized alcohol? I think it is. It is not purified by distillation. It is purified whiskey not distilled—purified by a process known to manufactures. It is not in reality alcohol in the common acceptance of the term.

Mr. Parrish—No, it is not purified whiskey, but merely rectified by distillation. It is about the proof of whiskey, or a little below.

Dr. Squibb—It is simply prepared by leeching the diluted spirit, by passing it through coarsely grained wood charcoal, being arranged in layers on a false bottom in leech tubs. This process frees it from fusil oil, and renders it pure alcohol and water. It, however, takes up from the charcoal some alkaline impurities. After this it is re-distilled, and becomes cologne spirit.

Mr. Parrish—I think it is an article of value, being cheaper than usual rectified spirit, and answering a most excellent purpose for alcoholic preparations.

Mr. Gordon—It is sold by its specific gravity, and is called neutral sweet spirit.

Mr. Colcord—We have an article with us that is called pure spirit, but I never heard the term sweet spirit before.

Mr. Guthrie—For what purpose is it used by liquor dealers?

Mr. Gordon—For the manufacture of imitation brandies and wines.

Mr. Parrish—We have noticed this particular difference between the diluted alcohol and the sweet neutral spirit. When you mix alcohol and water together, the odor is disagreeable, owing to the fact that the alcohol is not perfectly pure. This is not the case when the sweet spirits is used, and the liquors manufactured from it is very much more agreeable than when manufactured from ordinary diluted alcohol of the same strength.

Mr. Stearns—It is generally understood that brandy spirits are made from common whiskey rectified in the manner explained by Dr. Squibb, increased in proof by repeated distillation.

Mr. Procter (to Mr. Parish)—Are there any experiments that you have made to prove that the fusil oil is not present in this sweet or neutral spirit?

Mr. Parish—I have no proof, except that the peculiar odor of that substance is not present: but I consider that sufficient.

Dr. Squibb—The only means I know of purifying alcohol is that one mentioned—the leeching process.

Mr. Colcord, said that there was a spirit sold by Mr. Brainard, of New York, the mode of manufacture of which he believed was kept secret. He supposed it was the sweet spirit alluded to. It was proved as high as 95 or

98 per cent, and the price was regulated by the amount of sweetening. He stated that Mr. Brainerd claimed for this spirit four times the strength of the other, and it would give a better flavor. It was important to know whether this was true or not.

Mr. Parrish—There has lately been published a book translated from the French of Pare Lacour, on the preparation of the liquors which are sold and supposed to be imported. The book struck me as being in advance of anything I had seen written on the subject before. I think we can manufacture at an exceedingly low price a neutral sweet spirit of brandy, identical with that which we can buy at the Custom House. We buy adulterated liquors from across the waters: now I do not think there is any great merit in having them imported. Why not make them ourselves as well? When I say this, I must be understood to enquire whether we ought not to set to work to originate a liquor which we could use in place of brandy, and which at the same time should be official.

Mr. Proctor, inquired of Mr. Gordon, if any home brandy could be obtained that could be relied on?

Mr. Gordon—Hardly. Longworth, of Cincinnati, said that the genuine Catawba brandy is very scarce and cannot be manufactured for less than from eight to ten dollars a gallon. It is therefore evident that brandy bought for one-fourth of that sum cannot be pure.

Dr. Squibb was of the opinion that the spurious brandy could be prevented from being brought into the country by proper custom house regulations.

Dr. Guthrie—The real value of brandy, as recognized in the U. S. Pharmacopoeia, is a question which interests every druggist and physician. If the fact is notorious, as it seems to be, that brandy is not what it is said to be, even when it is made at home; that it is not what it is theoretically claimed to be; if these things are so, it seems to me of the utmost importance to have a report made upon the subject, in which these facts shall be embodied.

Dr. Squibb—Impure liquors may be kept out of the country by proper inspection, and it can be done if we have the right kind of inspectors. I trust this Association will appoint a committee to take action on that subject.

Mr. Colcord—When we were in Cincinnati we visited the vineyards and wine cellars in that city, and it was said that the Catawba wine was worth a dollar a gallon, and the brandy distilled from that wine would cost six dollars a gallon. The President of that Association has shown that it cannot be made for less than that amount. Now Catawba wine has advanced in price to \$1,50 per gallon, and yet Catawba brandy has been offered here in large quantities at \$1,50 per gallon. When it was offered to me at that price I tried to elucidate the matter with the seller. I told him of the impossibility of making such brandy at that price; yet he steadily maintained that it was pure. I am informed of the way that brandy is made. After the wine is pressed, you have what is called the pulp or marc left—the seeds, pulp, skins, and other parts of the grape. This pulp is taken and distilled, and there is either a spirit of grain whiskey put to it or else molasses or sugar—something mixed with it; and the *boquet* comes from the skin of the grape. There is enough

of this in marc to furnish the boquet for a large quantity of brandy. This is undoubtedly the article which we are receiving as pure Catawba brandy.— God knows what it is made of when it is not pure.

Mr. Gordon said he knew of a party in Kentucky who manufactured a spurious Catawba brandy, and offered it for sale to Mr. Longworth. The agent would not take the responsibility, of purchasing it and so referred the matter to Mr. Longworth, who said he would be willing to buy it if the salesman would to take his oath to its genuineness. Upon the naming of this condition the person retired, and nothing more was heard of him; but he met a farmer on the road, and effected an agreement with him to the effect that he should sell the liquor to Mr. Longworth as pure brandy for a premium of five dollars. This the farmer consented to do, and Mr. Longworth bought the article. (Laughter.)

Prof. Proctor presented to the Association for distribution, in behalf of Messrs. Bailliere, Bros., 440 Broadway, a number of copies of the new medical weekly—*The Medical Times*—and also copies of scientific books published by that firm.

The Association then adjourned to half-past three o'clock this afternoon.

WEDNESDAY AFTERNOON SESSION.

The Convention was called to order at half-past three by the Vice President.

The business committee, through Dr. Squibb, offered the following resolution, founded on a suggestion in the President's retiring address last year, recommending the establishment of a third order of members.

Resolved, That a change in the constitutional provision as to the eligibility to membership introduced in the address of the retiring President at the last year's Convention, and since reported on by the committee to whom the address was referred, be referred to the meeting.

Mr Parrish—I move that a committee be appointed to mature this subject with reference to future action of the Association. I will take occasion to say that our association might be very well extended in numbers. We have rather lost sight of that feature since we started. We should have a systematic method of extending our membership, so as ultimately to embrace all reputable druggists and apothecaries in the United States. I presume all druggists and apothecaries will have the same motives as those who have already enrolled themselves as members. We might have thousands as well as hundreds of the names of druggists on our books. if the subject were only brought before them. The annual expense is a trifle, the being a member gives a man a position and a status, or whether it does or not the member thinks it does.— There is a certain satisfaction in being enrolled in some organization. The dea that presents itself to me is that we ought to extend the membership.— The pharmacutists of Great Britain enroll all druggists and apothecaries of certain qualifications, as laid down in the terms of membership. It is considered essential to be a member. It would be so with this Association if we once had it understood that we were going to embrace all the druggists that are eligib'le to membership. The result would be a large increase, in the first

place, in our numbers, and, in the second place, in our annual income. We might then have a central office and a salaried officer, who should devote his time to the interests of this body, and thus take from the shoulders of our several committees a great amount of that kind of labor which we all know is so hard for them to do. Our worthy treasurer for instance, held the office for one year, and so arduous does he consider the duties that appertain to it, that he is compelled to offer in his resignation this year. All business matters should be given to a salaried officer, and then we should get along much better, and in reality do a great deal more work. There are a great many other things we might systematize; the business of adulterations might be referred to one person, to whom should be sent all those specimens that required analysis. Then again we would obtain immense influence, in reference to our numbers, when we should come to demand any legislative action in our behalf.

Dr. Squibb—I think instead of opening the door wide, the time has come for narrowing it. We do acknowledge qualifications—there is a part of the constitution that applies to it—and there is such a thing as qualifications which are necessary, which we all know. I think the simple fact of paying two dollars and making application is not a good reason, even if he does keep a pharmaceutical establishment, why a man should be enrolled as a member of this Association. I think the establishment of a third order of members to include eclectics, homœopathists, &c., would drive me out of the Association. If we open the door it would probably lessen the influence of this body. I would approve of a committee, however, being appointed to take the matter into consideration. If that committee report upon it favorably, then the Association might discuss it with more light.

Mr. Parrish—The action of this committee would depend a little upon the sentiment we may obtain in the Association now, and it is my misfortune to differ entirely in the scope of this thing with Dr. Squibb. I make a motion, however, and he seconds it. I am not afraid of bringing into the Association reputable druggists—those not sold to quackery. I do not propose to do away with our present qualifications—I do not propose to open the doors and not require vouchers; but I do think that any effort to cramp the Association in numbers is fatal to the grand end it has in view. When this constitution that is now in force was under discussion—was about being adopted, the whole question was then discussed as to how far the door should be thrown open. We had some members who were in favor of making it a simple matter of delegation, so afraid were they of getting some one in the Association not up to the mark. We soon saw that we would never amount to anything; we never had enough men in it to produce any impression, or execute any amount of work, and we adopted the present system. It is now wide open, and we take in all that are eligible. I do not wish to dispense with qualifications.

Mr. Parrish then offered a resolution, that a committee of five be appointed to mature a proposition to have a third order of members, and report at the next meeting of the Association.

Mr. Stearns—I do not understand the necessity of this movement at all.—The constitution states that the pharmacist and druggist is eligible. Section first reads:

Every Pharmacist or Druggist of good moral or professional standing, whether in business on his own account, retired from business, or employed by another, who, after duly considering the objects of the Association, and the obligations of the constitution, is willing to subscribe to them, is eligible to membership.

I do not see any necessity of amendment to the constitution—I think it is well enough as it is.

Mr. Colcord—I think the door is open so wide that the crowd can walk in, in sufficient numbers.

The question was referred to a committee.

John D. Dix being in the room, was called upon to answer the 16th question; referred to him last year, viz:

What are the adulterations of saffron as found in the commerce of the United States, and by what tastes may they be distinguished?

Mr. Dix said: Gentlemen, I owe the Association an apology—in the first place, in taking upon myself to do what I thought I might do, but which I have since found I cannot do. I should very much dislike to present a paper which could not cover the whole subject; and in the multitude of my engagements, and the utter exhaustion that attends them, I found it utterly impracticable to write such a paper or get out the facts of the case. The subject referred to me was the adulteration of saffron, Query 16. I then thought I could get at information without difficulty, covering more ground than merely statistical information obtained from the custom house, but I find on questioning my friends who are directly engaged in foreign manufacture, that they were very shy of giving me any information in regard to Spanish saffron. I can only say, that I have at the last moment obtained some samples of the various kinds offered in the market. (Mr. Dix here exhibited four boxes.) This box marked A is the true and legitimate article, and with a glance anybody can discover its genuineness, from the shape of its petals.—The specimen is not handsome, for the reason that the crop was not handsome, but rather poor. It has been imported in this city at from sixteen to eighteen dollars a pound, and it now costs twenty-two dollars to import it. The sample marked B is also true saffron, but about one-half of its virtue has been extracted—perhaps three-fourths—and it is then dried up, and sold as the true article. This was imported in Philadelphia, and there is a considerable quantity there remaining. [Laughter.] It bears all the characteristics of true saffron except the strength. The sample marked C is a large proportion saffron, but is greatly adulterated. It is sold in this market, and imported steadily as the true article. The percentage of adulteration, any person conversant at all with the article can easily detect; it is made up of marigold flowers saturated with the tincture of saffron. The sample marked D is marigolds entirely. It is sold here at from three to five dollars per pound. It is now sold largely in this city, because the druggists will have Spanish saf-

fron if they can get it at a very small proportion of the cost of importation. [Laughter.] I have never known true saffron so dear as last year. We have been able to sell it at nine or ten dollars a pound some times, but it is at this moment worth twenty-two dollars.

The business committee desired to call attention to another resolution laid over last year, offered by Mr. Fish, of Connecticut, and laid on the table at the time. It is as follows :

Resolved, That a committee of three be appointed to consider the propriety of holding annual sessions in the cities of New York, Philadelphia, Boston, Baltimore, and Washington, successively in each year, and also the appointment of a permanent Secretary at Washington, D. C.

Dr. Squibb—There is no need for discussion on this resolution ; it is only necessary to adopt it or not.

It was again laid on the table.

The business committee offered the following resolutions :

Resolved, That a suitable member be appointed by the Chair to prepare a full copious Index of the entire Proceedings of the Association, including the volume of the present session, for publication in the tenth volume.

Resolved, That a full set of the Proceedings be placed at the disposal of such member, to be retained by him after the labor shall have been performed.

The resolutions were adopted, and Thomas S. Wiegand, of Philadelphia, was appointed by the Chair, to that duty.

The Chairman of the Executive Committee offered the following names for membership, viz :

John C. Mattern, Pittsburg, Pa.

Jacob F. Haehnlen, Pittsburg, Pa.

Robert Thompson, Bloomington, Illinois.

Warren B. Gardiner, New York City.

George M. Wheeler, Detroit Mich.

William Johnston, Detroit, Mich.

Gustav Ramsperger, New York City.

Dr. Squibb—The business committee had some further business to call up. At the last meeting of the Association in Boston, Mr. Alfred B. Taylor, of Philadelphia offered the following resolution :

Whereas, The generous hospitality of the members of this Association, resident in the different localities at which meetings have been heretofore held, has been extended into an habitual degree of extravagance, which has occasioned much uneasiness among some members of the Association, especially in view of the migratory character contemplated in its organization ; therefore

Resolved, That we would respectfully deprecate such demonstrations, and hope that hereafter they may be discontinued, believing that by their continuance we shall be prevented from meeting in many places where, otherwise, we might assemble with great advantage to ourselves, individually, as well as the places visited by the Association.

Some discussion took place about this resolution, of but little importance, and the question was put and lost.

Mr. Colcord presented the names of Franklin K. Philips and W. T. S.

Cardey, who, having retired from business, offered their resignation, at the same time returning their certificates.

The resignations were accepted.

Mr. Stearns thought that the artistic execution of the certificate for membership was not what it ought to be, and urged the propriety of a change in its form. He then offered a resolution to this effect:

Resolved, That as the certificate to membership of this Association is not considered proper in artistic execution, a committee of three be appointed by the Chair to invite designs from artists for the purpose of examination, and aud that said committee be instructed to draw upon the treasury for a sum not exceeding fifty dollars, to pay the necessary expense, and report results at the next meeting.

Mr. Colcord—I do not think any action is called for in this matter. It will be time to act upon such a resolution when the Association shall find it necessary to grant diplomas of qualification, with those who choose to compete with us. I think it will be the case in two or three years.

Dr. Squibb heartily approved of the suggestions of Mr. Colcord.

The resolution was put and laid on the table.

The reading of queries was resumed, and occupied the rest of the afternoon.

The reading of scientific papers being in order, the answer to Query No. 6, on Aloin, was now read by Edward Parrish.

Query 19. This query, relative to the culture of *Elaterium*, was not answered by Henry A. Tilden, owing to his inability to get the seed in time for the proper season of growth.

Query 20. Relative to *Ergotized Maize*, was not replied to by Prof. Thurber.

Query 21. Relative to a test for *Extractum Cannabis*, was not answered by Edward Parrish,

Query 22. On *Gillenia*, offered for general acceptance, received no answer.

Query 23. Owing to reasons previously given, was not answered.

Query 24. On the balsamic nature of *Gusiac*, was answered by William Proctor, Jr.

Query 25. On the changes which spontaneously occur in the official *Ethereal Oil*, and the best means of retarding them, was answered in a paper, illustrated with various specimens of the heavy oil of wine, by Edward R. Squibb, of New York.

Query 26. Relative to the Salts of *Morphia*, was not answered by Dr. Squibb, owing to unavoidable circumstances, and was continued for next year.

Query 28. On *Krameria*, was not answered by Prof. Thurber.

Queries 29, 30, 31. Answers were stated to be ready, but the papers were not present, and were postponed till to-morrow.

Query 32. Was not answered by Mr. Cushman.

Query 33. Was not replied to by Dr. Battey.

Dr. Squibb desired to invite the Association to visit his establishment, 149 Furman street, Brooklyn.

Mr. Parrish moved that the subject of the place of the next meeting be taken up to-morrow at 11 o'clock.

Mr. Proctor—If any gentleman present feels that he can investigate a subject for a query, he will please hand his name and the question to the committee on questions.

Dr. Squibb—The business committee would like to know of voluntary papers that are to be read. There is one laid over on the Character of Cavendish, which Mr. Fish had not the opportunity to read.

It was moved that he have such an opportunity to-morrow.

On motion of Mr. Stratton, the Convention adjourned until 9 1-2 o'clock on Thursday morning.

THURSDAY MORNING SESSION.

THIRD DAY.

The meeting was called to order on Thursday morning by Dr. H. T. Kierstead, who was elected on Wednesday as the President for the ensuing year. He said :

Gentlemen,—In calling the meeting to order this morning, I beg leave to render my sincere acknowledgments for the very unexpected honor which the Association have conferred upon me, by electing me to preside over their deliberations. I say unexpected, because I was fully under the impression that some one of my more worthy brethren would have been selected for that station. At the same time I am free to confess a deep sense of gratification at being complimented by this body, and promise to discharge the duties devolving upon me to the best of my ability, relying upon your assistance and forbearance.

Gentlemen, at the time when sectional strife and jealousy have sown the seeds of discord in almost every widespread organization, when not only political, but religious questions have been embittered by mutual distrust and suspicion, it has been eminently gratifying, in such times, to witness the dignified indifference with which this scientific body has pursued the even tenor of its way. No clamor of demagogues has found an echo here—no factious whisper has ever disturbed your harmony. With pure patriotism and philanthropy, you have met from year to year, from north and south, from east and west, to discuss like brethren, questions involving the common good of all. And those of you who like myself, have turned with feelings of melancholy from the spectacle of warring sections, will appreciate the pride with which I respond to your flattering tribute.

May future years confirm the precedent you have so well established, and demonstrate that where men's hearts are right, there may always be found some common ground on which patriots from every section may stand together, without a sacrifice of right or dignity. [Applause.]

Gentlemen, we are ready to proceed to business. The first in order I presume will be the reading of the Secretary's minutes.

The minutes were read and approved.

A number of candidates for membership were proposed by the executive and elected by ballot.

Victor Heydenreich, Brooklyn, New York.

Augustine Pressenger, New York city, New York.

George Blinkhorn, Rock Island, Illinois.

Thomas R. Combe, Philadelphia, Pennsylvania.

A ballot was ordered, and Messrs. Cushman and Coddington acting as tellers reported their election.

The President—It appears to be now in order to resume the reading of the queries proposed last year, if any member is here ready to report.

Mr. Proctor—It is usual, Mr. President, to take up the other business at the first portion of the session. The only objection to this course now, is that the chairman of the business committee, Mr. Squibb, is not yet come, but I know that he has some business to propose this morning.

To occupy the time until the arrival of Mr. Squibb, Query No. 31, relative to the commercial varieties of Arrow Root was read and was answered from some meagre notes on a slip of paper by E. T. Ellis of Philadelphia.

Mr. Stearns moved that the subject be referred to the committee having in charge the selection of questions to be made the subject of further investigation.

Mr. Colcord—It was the sense of the Association yesterday, that only finished papers should be accepted here.

We cannot use that paper in the shape it is, as I believe only a part of it is written. If he wishes it published, it is necessary that he should have time to finish it for the printers. I should like to move that Mr. Ellis have a fortnight or ten days to finish his paper, to be referred to the executive committee with discretionary powers. I do not understand what part of it was written for publication.

Mr. Ellis—I did not intend any part of it for publication. I did not offer it for that purpose.

The President—The Chair understands that Mr. Ellis merely submits this as a report in part of progress.

Mr. Parrish—I propose that it be referred to Mr. Ellis for another year.

Motion carried.

The query read in the book of proceedings as follows :

An inquiry as to the comparative value of the Georgia, St. Vincents', derived from *Maranta arundinaceas*, Bermuda, and other arrow roots. Whether there are any distinctive characteristics arising from climate, soil, mode of preparation, or any other cause that would give a preference to either.

Mr. Colcord the object of that query was, as I understood it at the time, to establish the idea of what the commercial article known as St. Vincents' arrow-root was. We have the article in market at prices ranging from 35 cents down as low as 12 cents a pound. I understood the question to be an inquiry not as to what the arrow-root is, but as to where it comes from. I look upon the name St. Vincents' as a designation for a dozen different kinds of arrow-root that come to the market. There are also a dozen different kinds of arrow-root which come from all parts of the world, by the name of West Indian arrow-root. The question was put to find if these different arrow-roots were true or false. It was an important query, and I hope we shall have a paper this year, that shall fully settle the question.

Mr. Parrish—I do not think the language of the query would lead any one to suppose that. The question as written seems to include the whole subject

of arrow-root. In fact, starch is called arrow-root. There are starches imported into London, England, that are worth from 2 to 3 cents a pound by the ton, and bought by dealers and put up and sold for the ordinary purposes of starch.

Mr. Stearns—I have understood that a large proportion of arrow-root in our market was produced in Connecticut.

Mr. P. W. Bedford said he could not see that the query meant anything in particular as it now stood. He would like to enquire if there was not an error in the printing, and if the words "derived from *Maranta arundinaceas*" should not be at the end of the sentence instead of in the middle.

Upon examination this was admitted to be the case.

A grammatical error was also noticed, viz: "whether there is any characteristics," &c.

The President read a letter from the Faculty of the New York Medical College, addressed to Mr. John Meakim on the outside, but on the inside to the Pharmaceutical Association, which, owing to some considerable delay, had not been received until this morning. It read as follows:

Gentlemen, I have the honor to inform you that, at a meeting of the Faculty of the New York Medical College, on motion it was unanimously resolved that the Faculty respectfully tender the room of the Medical College, 90 East 13th street, to the Association during their Convention in this city.

Signed,

.....
Mr. Colcord moved that the communication be received, and the thanks of the Association tendered for the invitation.

Adopted.

The President invited any one to sign the register of members present, who had not done so.

The following names were thereupon added to the list:

C. Shivers, Phila.
Geo. W. De la Vergne, N. Y.
F. Stearns, Detroit.
E. Donnelly, Phila.
M. F. Ash, Jackson, Miss.
C. A. Heinitsch, Lancaster Pa.
Evan T. Ellis, Phila.
W. M. Somerville N. Y.
F. Victor Heydenrich, Brooklyn.
H. Q. Mack, N. Y.
J. Lindley Pyle, Brooklyn.
W. T. Ball N. Y.
Geo. Mowbray, do.
Augustine Presinger, do.

Queries No. 34 and 35 were called by the Secretary, but Mr. Fish, by whom they were accepted, was not in the room at the time. It was stated that he had papers on the subjects.

Subject 36 was as follows:

An essay on the products resulting from the distillation of bituminous coal and allied substances.

It was last year referred to and accepted by Wm. H. Whitmore, of Boston.

Mr. Parrish—I have a letter from Mr. Whitmore, written to me, which if the chairman please I will read—or a portion of it—in order to explain circumstances which Prof. Proctor will make more manifest.

Mr. Parrish read from the letter of Mr. Whitmore.

It stated that he had prepared a report on the subject assigned him last year. Finding some six weeks ago that he should not probably be able to attend the Convention, after some consideration and consultation, decided to print his ideas on the matter, and ask it to be received in that form to be distributed to the members of the Convention. Therefore, he had sent 300 copies directed to their care at University Building to meet them there. He should wait the approval of the Convention before giving away any of them; and the copies sent were at their disposal to be distributed among members of the association; though if the Convention declined to receive the address in printed form, nothing need be said, and he would keep the package.

Mr. Proctor—I will only remark that here is a copy of the pamphlet alluded to, and it becomes a question with the Association whether they will receive it in this form.

Mr. Parrish—The only objection that I see to this report is in the fact that it is printed. To the report there were also appended certain other matters which would not be likely to print in its proceedings, if sent as a part of his report; and in order to understand his report, these other matters seem to be necessary, so that it becomes a question what we shall do with it. It is rendered bulky by the introduction of a number of quotations or extracts from other works, which we might not wish to publish.

Mr. Procter—It is a subject that must be disposed of one way or the other. The question is brought before us by the letter. It is proper for the Association to ask whether they will receive the report in print—it occupies about five pamphlet pages—and then if they will accept this appended matter, which consists of Dr. Storer's history of the manufacture of Paraffine Oils; Patent to James Young; Review of Dr. Antisell's work on Photogenic Oils, &c. The question is, will you receive these and publish them?

Mr. Stearns—Are references made to the appended articles?

Mr. Procter—Yes, sir.

Mr. Stearns—I move that it be referred to the executive committee with power.

Mr. Procter—Mr. Whitmore asked permission to report on this subject and it was granted him, and I see no impropriety in having it read.

Dr. Squibb—I would amend that it be read first.

The amendment being carried, Mr. Procter read the original portion of the paper.

Mr. Parrish—I move that the report be referred to the executive committee with power.

Mr. Colcord—I do not see that that report has anything to do with the druggist's business any more than the manufacture of cotton cloth. I amend that it be accepted, and filed with the Secretary's minutes.

Dr. Squibb—I do not agree with Mr. Colcord. It is a report on a subject appointed by this Association, and referred to this gentlemen. I would accept it and publish it in the proceedings; the information in it is certainly interesting.

Mr. Bullock—The course proposed by Mr. Colcord is not often pursued by us. We have generally referred all papers to the executive committee except in one or two cases in which we have ordered them published. If we vary much from this rule it will be a marked course with this paper, and I should like the course adopted, suggested by Mr. Stearns.

Mr. Colcord—It would be a dangerous precedent to accept and refer a report which has been published and distributed.

Mr. Parrish—It has not been distributed—I have no feeling about the matter. I read from the letter that it is not distributed.

Mr. Proctor—The objection of Mr. Colcord, that it does not refer to our business, I think is answered by the fact that the question was given out by the Association to the gentleman.

Mr. Parrish—I would remark, that I think it a very great advantage to have things previously printed; and I should be in favor of our reports being previously printed. For instance, our Report on the Progress of Pharmacy. It would have facilitated matters prodigiously in getting out the proceedings, if this course had been pursued. I think it a fine thing to have a paper printed—it greatly facilitates its reading.

Mr. Colcord—My opinion of the paper is that it is intended as an advertisement of the Clinton Coal Oil Company, Boston, and to be referred as an endorsement of this Association of them. I have no feeling about the matter; I might make an explanation about it. This gentleman wanted to address the Association last year. He was told if he wanted to say anything about coal oil he might write a paper. I think it will be used as an advertisement.

Mr. Proctor—I expected from the gentleman a thorough, scientific investigation of the subject, founded on logical results of his own production, but I must say I think this paper a very shallow affair.

Mr. Stearns—Then I withdraw my motion to accept.

Mr. Squibb—I disagree with Mr. Parrish about the previous printing of reports. I should be sorry to see such precedents adopted. The single copy presented here is all that we want, until we have given authority for its publication. It is a strong objection to this report that it has been printed. It has been through many hands in the process. Other copies may have been printed without his knowledge.

Mr. Parrish—I only mean that the executive committee might so far anticipate the convention, as to print the document beforehand.

Mr. Squibb—I think it would be unadvisable, before the Association hears them.

Mr. Parrish—The Association refers things every day to the committee in this manner. The Progress of Pharmacy Report was not all read, but referred to the committee. There are many objectionable things in it.

Mr. Squibb—We have confidence in the committee.

Mr. Parrish—You would have the same confidence in the case of their printing papers beforehand.

A motion was made to lay the report on the table.

Mr. Colcord—I should prefer not to see that report laid on the table. I object to laying it on the table. I do not wish to say too much of the Boston advertisement—I came from Boston myself—I feel sensitive about it. I know the parties there, and I should hope that the report would be accepted, and had in the Secretaries' minutes.

Mr. Parrish—I am opposed to laying it on the table; it would be an unfair thing. We really know nothing about this man using this as an advertisement. We asked him to send this report; now we lay it on the table. Why? Because he has printed it.

Dr. Guthrie—I move to amend, that the report be accepted and filed in the papers of the Association. I wish to say simply this: As I understand the matter, it will not be impossible—it is not improbable that it may occur to us hereafter to seek for information outside of our corporate members. But if it is known that we have referred any subject, whether trivial or great, to a party who has taken the trouble to report on it probably to the best of his ability, though it may be shallow, and has furnished the Association with that report in accordance with its request; and when the simple dictates of courtesy between gentlemen should compel us to accept the labor, unless there is something absolutely wrong in it, yet, then, we have laid it on the table; would any one else subject himself to similar treatment? If we receive it and file it with the papers of the Association, it does not follow that we publish it. I should dislike that a report which had been furnished at our request, should be treated with the silent contempt which laying on the table would indicate. I therefore amend, that the report be accepted, and filed among the papers of the Secretary.

The amendment was adopted.

[TO BE CONTINUED]

Selections.

FOOD FOR BABES, OR ARTIFICIAL HUMAN MILK, AND THE MANNER OF PREPARING IT AND ADMINISTERING IT TO YOUNG CHILDREN.—This is the title of an admirable little duodecimo from the pen of Dr. Cumming, of Williamstown, Mass.

He proposes a plan for supplying *Artificial Human Milk* to infants unable to procure from the maternal breasts, nutriment of the proper quality and quantity. He has adopted this plan in his own household for a number of years with the most gratifying success. He claims that it produces a wonderful immunity from colic, pain in teething, and various disorders of the stomach and bowels; that it contributes materially to uniform growth, prosperity, vigor and health, if it does not secure it; and that in many cases it will relieve almost instantly the distressing symptoms of wasting diarrhoea, &c. He

states that in composition it closely resembles the natural secretion of healthy and vigorous mothers, and contains all the ingredients necessary for the proper growth and development of the child. This artificial human milk is to be obtained in two ways.

1st. By taking the *upper third* of cow's milk that has stood for four or five hours; this containing fifty per cent. more butter than the ordinary milk of the cow.

The second, and in warm weather, the better way, is to take the milk from the latter half of that given by the cow, (containing "strippings,") taking care that the cow be milked dry. In both instances, the milk is to be diluted with $1\frac{1}{2}$ parts of soft water, and properly sweetened with loaf sugar. The animal from which the milk is to be taken, must be from 4 to 10 years of age, and free from disease of any kind, it being unimportant that she should give a large quantity of milk. Her calf should not be less than two weeks old, and when it becomes four or five months old, the cow is to be given up and another selected. The best feed for the cow is hay and salt and water, which will improve the quality of milk, though the quantity may be less than when other articles of food are employed.

Various dilutions are of course required for various ages.

Thus for the first two weeks after the child's birth it is to be furnished with an *artificial colostrum* which requires the use of the upper *eighth* instead of the upper third of the milk which has stood for four or five hours; or, the employment of the last *tenth* of the milk furnished by the cow.

A schedule is given, arranged to suit the wants of vigorous children of various ages,

Attention is to be paid to the physical condition of the child as well as its age in preparing the required dilution.

The milk should be prepared twice a day in warm weather, unless kept on ice.

The milk is to be administered by means of a bottle, with the neck occupied by an artificial nipple composed of a goose quill rolled up in a strip of muslin, all of which are to be kept scrupulously clean.

The milk should be given at regular intervals, the child taking at each as much as it wants; and the child should be trained to pass 6 or 8 hours at night without being fed.

The temperature of the milk when given should be about 100 deg.; it should be taken slowly, and the flow from the bottle controlled by a proper arrangement of the quill and muslin.

Dr. Cummings thinks this mode of feeding should be continued until the children obtain their full set of teeth, or to nearly the age of two years—or at least rely exclusively on it until 16 teeth are fairly developed, when other food may be gradually commenced with.—*Medical and Surgical Reporter*.

MURIATE OF AMMONIA IN NERVOUS CEPHALALGIA.—Professor Barallier, of Toulon, reports that within the last three years he had administered the substance in 259 cases of nervous cephalalgia, and with success in 202 of these.

He gives forty-five grains combined with mint-water and syrup of orange-peel, divided into three doses, to be taken at intervals of half an hour, amendment commencing after the first dose, and the third frequently not requiring to be taken. To prove effectual, however, the remedy should not be given at the very commencement of a paroxysm, but when it has acquired great intensity. This agent not only gives relief to the urgent pain of the paroxysms, but, after having been had recourse to on several occasions, diminishes the number and frequency of these. To be of use, it must not be indiscriminately used for every cephalalgia; and the result of the analysis of M. Barallier's experience leads to the following conclusions:

1. The muriate almost constantly dissipates paroxysms of idiopathic migraine, and migraine consecutive to too abundant menstruation.
2. It is powerless in the hemicrania which is dependent upon irregularity or suppression of the menses.
3. It is tolerably successful in cranial pains dependent upon disorder of the stomach, and the accidental cephalalgia frequent in women and feeble persons under the influence of sudden changes of the atmosphere, prolonged intellectual labor, or moral emotion.
4. It operates beneficially in cephalalgias consecutive to repeated paroxysms of intermittent fever; those which are observed during the decline of severe fever, and in the course of the irritative period of typhus.—*Bull. de Therap. and Dublin Med. Press.*

"NEURALGIA WITH DEAFNESS CURED INSTANTANEOUSLY BY THE EXTRACTION OF A TOOTH.—M. Ed Vautier records (*Gaz. des Hôpît.*, 14 June, 1860,) a case of this. The subject of it was a very nervous, slender woman, who had suffered for about four months with intense neuralgic pains, radiating through almost all the teeth, and also the muscles of the anterior region of the left side of the head. There was constant lachrymation of the left eye, and from the moment of the attack complete deafness in the ear of the same side. A number of physicians had been consulted, and sulphate of quinia, flying blisters, and atropia, in succession, tried without giving relief.

"When seen by Dr. B., she was suffering severely; had long been deprived of sleep, and could not chew her food. The teeth were examined with care, but no one could be found carious. The wisdom tooth on the left side seemed, however, slightly painful on being touched, and loose. She was advised to have this tooth extracted, but with some temper refused. However, some days afterwards, her physician again advising it, she consented, and the tooth was extracted by M. Vautier. The pains at once ceased, and her hearing was restored. A month has since elapsed without any return of her complaint. She seems to be permanently cured.—*Journal de Méd. de Bordeaux*, June, 1860"—(*American Journal of Medical Sciences*, October, 1860.)

HYPODERMIC MEDICATION BY SULPHATE OF QUININE.—The subject of hypodermic medication is now attracting much attention. Much has been said about its great efficacy in neuralgic affections, where the effect is supposed to be a local one, though, at times, the constitutional symptoms are quite marked.

The results of experiments performed by Dr. I. Sanger, of Davenport, Iowa, with sulphate of quinine, and reported in the *New York Medical Press* for June 16, 1860, prove that this drug, at least, acts after its absorption. The article is quite lengthy, but the following conclusions contain the substance of the author's labors:

"1. Certain agencies most powerful when hypodermically used will become ineffacious when administered in stomach doses.

2. Sulphate of Quinine injected into the areolar tissue will act quicker, more powerful, and with equal if not with more certainty in subduing the primary symptoms of malarial infections, than when administered by the mouth.

3. Sulphate of Quinine injected under the corium even in large doses, one scruple at one injection, will not produce excessive cephalic symptoms.

4. Sulphate of Quinine injected under the corium, if necessary, during a paroxysm, will be followed with less aggravated symptoms than in stomachic doses.

5. Where the Sulphate of Quinine is indicated, the local irritation of the stomach and appendages constitute no contra-indication.

6. The injection must always be made under the corium.

7. The solution must be rendered neutral to avoid unnecessary pains.

8. For the same purpose, also for dissolving the crystals sometimes precipitated in a solution of Sulphate of Quinine, the temperature of the solution must be increased to blood heat and over.

9. Sulphate of Quinine hypodermically applied is received into the system in a greater state of purity than when given by the stomach, where it may become contaminated or decomposed."—*Boston Med. Journal*, Aug. 2, 1860.

CHLOROFORM PAREGORIC, OF DR. HENRY HARTSHORNE.—"Take chloroform, tincture of opium, tincture of camphor, aromatic spt. of ammonia, of each f 3 iss., oil of cinnamon gtt. iij., brandy f 3 ij. Dos., f 3 ss. or less in spasmodic affections of the stomach, cholera, &c. Several practitioners have used this preparation with favorable results in severe cases.—*Chemist and Druggist*.

TO MAKE A BLISTER.—Steep cantharides in æth. sulph. for a fortnight, or until the cantharides float upon the surface; skim it off. One dram of cantharides, one dram of white wax, five drams of olive oil, melted together, mix. With a brush paint it over some white bibulous paper, and hang it up to dry in a current of air. Take a piece of pink paper, form and size required, and paint the uncolored side over with a weak solution of india rubber; cut your cantharides paper the form and size (less a margin) of the pink paper; while the india rubber solution is still sticky place it on; when dry roll it up. It is unaffected by damp, is light, portable, blisters with certainty, and without pain. The introduction of the caoutchouc varnish, arrests the perspiration of the part, and increases doubly the certainty while diminishing the time required for application. Before applying, the blister should be held over the steam of hot water. The blister will be effectual for several times.—*Dublin Hosp. Gaz.*

MAYESVILLE, S. C., OCT. 8, 1860.

Dr. L. V. Newton,

DEAR SIR:—I promised some months since, to give a recipe which would make a medicinal preparation, resembling Osgood's Indian Chologogue in every essential requisite. I had forgotten my promise until to-day the October number came to hand. I find a correspondent desires to know the composition of this famous remedy. I can give him a recipe for a most admirable substitute; one which will leave him no longer solicitous about the composition of the Chologogue. He will find the medicine made by this recipe to be very similar, if not identical, in taste, smell and effects, being all that is really requisite:

R. Sulphate of quinine, - - - - -	3 ii.
Tilden's fluid ext. leptandria, - - - -	3 i.
Saturated tinct. stillingia, - - - - -	$\frac{3}{4}$ iv.
Tilden's fluid ext. podophyllum, - - - -	3 iii.
Oil sassafras and oil of wintergreen aa. - -	gtts. x.
Best N. O. molasses or treacle, q. s., to make	
8 oz. mixture.	

This mixture to be well shaken up before a dose is measured; as the quinine, (not being dissolved,) will settle to the bottom of the bottle. The dose for adults is from one to three teaspoonsful three times a day. The dose is, however, a matter dependent entirely upon the nature of the case; and may be less or more according to circumstances. Again, the proportion of the ingredients may be altered to suit particular cases. The formula given is extremely well adapted to those cases, marked by very great hepatic torpor; of course in the opposite conditions, not so much of the stillingia would be required; and the proportion of the leptandria and podophyllum may also be reduced. To succeed perfectly in breaking up the paroxysms of fever the quinine cannot be reduced in quantity. It usually requires at least one 8 oz. bottle of the mixture to insure a permanent cure. When Tilden's fluid extracts cannot be had, saturated tinctures may be used, but in increased quantities; say, rather more than double the quantity given of the fluid extract. In order then to preserve the true balance, the mixture must be made to measure 10 ounces, and a corresponding increase of dose must be made.

The principle of combining the quinine with those vegetable alteratives which exert their influence chiefly upon the glandular system, exciting them to increased action, will be readily understood by physicians, and will, if adopted generally, lead to a much greater success in the management of malarial fevers, and certainly to a much more satisfactory result in the treatment of the sequelæ of those fevers. I may also add, for the benefit of your Florida correspondent, that this chologogue compound has succeeded perfectly in several cases of "dirt eating." If he is a physician, he will readily understand its *modus operandi* in such cases. Hepatic torpor with weak digestion, being characteristic of the habit, this combination will be very apt to relieve.

If your correspondent desires to know how long my attention has been given

to this subject, you may refer him to the "Southern Medical and Surgical Journal," 5th vol. 1849—page 376.

Very truly yours,

J. A. MAYES, M. D.

Editorial.

AMERICAN PHARMACEUTICAL ASSOCIATION.—We give this month, in detail, the report of this Association, believing the proceedings of so large and important a body as this has now become, having so close relations to the medical profession, will be interesting to them.

Its proceedings were characterized by an unusual degree of unity and harmony which is evidence of a devotion to the objects and aims of the Association on the part of the members, to the exclusion of selfishness and jealousies which too often creep in, engendering personal animosities, to the injury and ruin of volunteer associations.

The Society now numbers five hundred and thirty-five; eighty new members having joined at this meeting.

The discussion upon scientific papers and reports we shall publish as we can find space. For the report we are indebted to the *Drug Reporter* and *Journal of Pharmacy*.

Year Book of American Contributions to Medical Science.

We give Dr. Gibbs' Circular in relation to the work he proposes to publish for the medical profession, and shall notice it more fully when it is issued.

CIRCULAR.

The Undersigned proposes to issue a yearly volume with the following title:—"Year Book of American Contributions to Medical Science and Literature."

It is designed that Part *First* of each volume, shall comprise an arranged and classified *Summary* of, and index to, all the important original papers found in the various *Medical Journals* of this country, for the year immediately preceding. Part *Second* will comprise a *Summary* of, and index to, all papers found in the published transactions of the National and the various State Medical Societies. Part *Third* will embrace *Reviews* of all medical books of American authorship, published during the year, with a *Summary* of all the novelties in opinion or practice therein. A copious index will complete the work. To the above plan and arrangement, such other additions shall be made as time and circumstances may suggest. The first volume will be issued early in the year 1861.

For the preparation of our *Monthly Summary of American Medical Journalism*, per the *A. M. Monthly*, we have arranged for all the American Medical Journals (over thirty in number) and at least four of the best European. To facilitate our design, we request a *continuance* of the exchange.

American authors of medical works, and publishers of the same, are requested to send to our address a copy of their respective works and publications. Medical Societies that publish their transactions, will, we trust, be kind enough to send a copy of the same to our address. For the kindness of an exchange from Journal publishers, authors, book publishers, and Presidents of Societies, we shall be happy to reciprocate by an *exchange of publications*.

The importance of a work of the character as above, which shall comprise *all there is of interest* in the more than 80 Journals, medical books issued for the year, and the various society transactions, will be readily conceded by all. We cannot prepare the work and publish it at a pecuniary loss, and hence the object of this Circular is to request that all physicians who would encourage the work, and become subscribers to the same, *would send us their names at once*—payment to be made only on the publication of the work. The work shall contain from 600 to 800 pages, to be substantially bound, and furnished at the very low price of *Three Dollars*. That we may know whether the work is to receive sufficient encouragement to justify its completion and publication, we request that subscribers' names may be sent in *immediately*. As a special favor we request that our friends will not allow a day to pass before responding to this Circular.

O. C. GIBBS, M. D.,
Frewsburg, Chautauqua County, N. Y.

T H E
JOURNAL OF MATERIA MEDICA.

DEVOTED TO

Materia Medica, Pharmacy, Chemistry, &c.

Vol. II.]	D E C E M B E R, 1860.	[No. 12.
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Indigenous Tonics.

BY CHARLES A. LEE, M. D.

NUMBER XII.

CHELONE GLABRA.

Natural Order, *Scrophulariaceæ*; Sex, System, *Dydynamia* *Angiospermia*.—

Common names; *Balmoney*, *Snake Head*, *Turtlebloom*, *Turtle Head*,
Salt Rheum Weed, etc.

THIS well known North American plant, deriving its name from a Greek word signifying *tortoise*, the corolla resembling in shape the head of a reptile, belongs to a genus containing but few species, one only in the Northern and Middle States; all herbaceous plants, with white, rose color, or purple flowers, abounding in hot places, and flowering from July to September. The present species has a perennial root and an erect stem; from two to four feet high, with subsessile or petiolate leaves, and flowers terminal in a dense short spike.

There are several varieties of the plant, differing in the form and insertion of the leaves and color of the flowers, which vary

from pure white to purplish. The leaves are the part used in medicine. They are extremely bitter, but inodorous, and yield, on analysis, a peculiar neutral substance, *chelonin*, some tannin and gallic acid, starch, gum, sugar, &c. Its active principles are imparted to both water and alcohol. The medical properties of the chelone have been, as yet, but imperfectly investigated, but sufficient trials have been made to prove them decidedly tonic, laxative and anthelmintic. It has long enjoyed considerable reputation in popular practice, as a remedy in jaundice and chronic hepatic diseases, as well as for the removal of worms, for which it seems well adapted. That it excites the secretory action of the liver, when given in small and regular doses, cannot be questioned, while, at the same time, it exerts a tonic influence upon the digestive organs, and an alterative effect upon the system generally. Hence it is a highly useful remedy in many chronic affections, where a conjoint depurative and tonic indication is present. As an alterative, we combine from one to two grains of *chelonin* with two grains of rhubarb; as anthelmintic, two grains of *chelonin* may be combined with one grain of *gelseminin*, or ten grains of powdered *wormseed*. *Iron by hydrogen* also forms a good combination in such cases. As a tonic, it is well adapted to cases of atonic dyspepsia and convalescence from acute diseases. In hepatic torpor with tendency to constipation, it will be found a highly useful remedy, but not to the exclusion of occasional adjuvants, as the mild mercurial preparations.

The *chelonin*, *fluid extract*, *tincture*, and *syrup* are the only preparations that need be employed. The *chelonin* is preferable where the pillular form is desirable, and may be given in doses of one to two grains, while the *fluid extract* in doses of one dram is well adapted to a majority of cases where a stomachic effect is indicated. The *tincture*, prepared with one ounce of the leaves to one pint of proof spirit, or one ounce of the fluid extract to eight ounces diluted alcohol, may be given in similar doses. The *syrup* is well adapted to many cases, especially of children, and as anthelmintic, and may be extemporaneously prepared by adding half an ounce of the fluid extract to twelve ounces of syrup; dose, three to five drams. The above preparations of this plant are now kept in the shops, of Tilden's manufacture.

CEANOTHUS AMERICANUS.

Natural Order, *Rhamnaceæ*. Linnean System, *Pentandria Monogynia*.--
Common names, *New Jersey Tea*, *Red Root*.

This genus consists of shrubby plants having large, reddish roots. The leaves are alternate, and nearly ovate or elliptical, while the flowers are white, blue or yellowish, in umbel-like fascicles, aggregated at the extremity of the branches. All the species have similar medical properties.

This plant is found extensively throughout the United States, in dry woods, and flowers from June to September. No correct analysis of it has yet been made. It no doubt contains a peculiar alkaloid or resinoid principle, with considerable gallic acid, gum, starch, &c. The leaves, when dried, have much the odor of black tea, for which it was considerably used during the revolutionary war. The leaves have also a slightly bitter and astringent taste, but less strangely marked than that of the bark of the root, which is extremely bitter, and affords a cinnamon colored dye.

This plant is well adapted to all cases where a mild astringent tonic is indicated. It forms an excellent gargle in the apthae of children as well as the various forms of cynanche, in which the throat and fauces are involved. It has been used with success in dysentery and chronic diarrhoea, as well as an antiperiodic in malarious fevers. Among the Indians it enjoys great reputation as a febrifuge and astringent, and as a remedy for gonorrhea and syphilis for which a strong decoction is used. According to Ferrien, gonorrhea is very speedily cured by this plant. It makes an excellent astringent wash for flabby-conditioned ulcers and sores, and for an injection in leucorrhœa, gleet, &c. An infusion has been found highly useful in chronic ulceration of the gastro intestinal mucous membrane, as well as morbid relaxation of the same.

Its preparations and doses are the same as those of chelone, although not, as yet, kept in the shops.

CEPHALANTHUS OCCIDENTALIS.

Natural Order, *Cinchonaceæ*. Linnean System; *Tetrandria Monogynia*.--
Common names; *Button Bush*, *Pond Dog Wood*, *Globe Flower*, *White Ball*, &c.

This well known shrub, the only American species of the plant, grows from three to fifteen feet in height, has opposite or alter-

nate leaves and terminal flowers, forming balls of a cream white color, about an inch in diameter, on peduncles of two inches long; growing in low wet situations or on the banks of streams and ponds. There are several varieties, flowering in July and August. The flowers have a peculiar and heavy odor. The wood is light and spongy. The whole plant is bitter, especially the bark of the root, which when dried, somewhat resembles Cascarella in appearance and qualities. The active principles are volatile oil, bitter extractive, gum, starch, &c. Its medical properties are those of a laxative tonic, with considerable antiperiodic powers. Hence used extensively in many places, especially at the south, in the treatment of intermittents. The inner bark of the root is an agreeable aromatic bitter, and has been recommended in obstinate coughs. This plant is also one of the favorite remedies among the aborigines.

Preparations the same as the chelone, &c.

DICENTRA EXIMIA, CUCULLARIA AND CANADENSIS

Natural Order; *Fumiaraceae*. Sex, System; *Diadelphia Hexandria*, Common names; *Turkey Corn*, *Stagger Weed*, &c. THE BARK.

The *Fumitory* family of plants in the United States embraces three indigenous species, all possessing bitter stems and watery juice, delicate smooth herbs, with compound dissected leaves and irregular flowers. They are the *Adlumia*, (*Climbing Fumitory*) *Dicentra*, (*Dutchman's Breeches*) and *Corydalis*. The *Fumaria*, or common Fumitory has been introduced from Europe. All are endowed with mild tonic and alterative properties.

The *Dicentra* has not been elaborately analyzed, but it is known to contain a peculiar bitter principle, *Dicentrin*, analogous to *Corydalin*, with the other organic constituents common to most other plants. Its medical properties, though not so strongly marked as those of some other of our native plants, are nevertheless sufficiently valuable as to entitle it to a respectable rank among our indigenous tonic alteratives. Its virtues are certainly equal to those of the foreign *Fumaria*, so highly praised by Cullen as an alterative in cutaneous affections. It possesses no acrimony or astringency, and acting on the kidneys, skin and liver, may be called a general depurant. Indeed, it has been maintained by some practitioners at the South that it is a good substitute for

mercury in venereal complaints. Our experience has not been sufficient to enable us to express any opinion on this point, but we believe it will be found highly useful in this class of complaints, and especially in affections of the skin, of a scaly character, as lepra. It has also been found efficacious in scrofulous diseases and obstructed menstrual flow. In some parts of the country it is employed as an anthelmintic. It has the properties of the pure bitters, as gentian, columbo, &c., and may be substituted for them.

Preparations of this plant from the manufactory of the Tildens are now found in market, enabling the practitioner to test its medical value more satisfactorially than has hitherto been done. These are the *fluid extract*, *corydalin*, *tincture* and *compound syrup*. The dose of the fluid extract is from half to one dram; of corydalin, one-half to one grain; while the tincture is made with three ounces of the fluid extract to one pint diluted alcohol, of which the dose is one to two drams. The compound syrup is made of two ounces of the fluid extract, one ounce of fluid extract of blue flag to eight ounces of syrup, of which one-half to one dram is an ordinary dose. As an alterative in syphilis, it is recommended to combine eight grains of corydalin with ten grains hy drastin, and divide into twelve powders. In scrofula, as well as syphilis, it may be combined with advantage with xanthoxylin in the proportion of two grains of corydalin with six of xanthoxylin, divided into three powders to be taken daily.

ARTEMISIA CAUDATA. (*Slender Wormwood*.)

A. Ludoviciana, (*Western Mugwort*.) *A. Biennis*, (*Biennial Wormwood*.)
Natural Order; *Compositae*.

Three species of wormwood are found in North America possessing the same medicinal properties as the officinal (*a absinthium*), and though as yet, not introduced into regular practice, they may be substituted for the foreign species. Like this, they may be employed as stomachics, anthelmintics and all the purposes of the simple bitters, whether in the form of infusion, tincture, fluid extract, powder or syrup. They also possess emmenagogue properties. There is no satisfactory evidence that any of the species of artemisia possess narcotic properties, although this opinion has extensively prevailed. The species generally contain more or less

volatile oil in combination with a peculiar bitter principle (*absinthin*.) They are somewhat diuretic as well as diaphoretic. Formerly they were much used in intermittent and remittent fever, but their antiperiodic power is feeble. The officinal wormwood, according to Griffiths, acts as an irritant and stimulant in large doses, and appears to affect the cerebro-spinal system, causing vertigo, headache, &c. Hoffman recommends the essential oil as an antispasmodic and anodyne. On the continent of Europe, the wormwood is in general use as a bitter, and as a remedy for dyspepsia. The infusion or fluid extract is the best form of administration.

But little need be said of our remaining tonics. Of the well known *tanacetum* (*tansy*) we have one indigenous species possessing the same properties as the exotic *T. vulgare*, viz; *T. Huronense*, abounding on the shores of the great northern lakes, and north-westward. We have eight species of *sabbatia* and nine of *gentian*, all of which are endowed with tonic properties.

The *lichens*, or *lichen tribe* of plants yield a considerable number of genera and species which may be employed in the arts or as demulcent tonics and nutrients. The nutritive properties depend on the presence of an amylaceous substance, analogous to gelatine, which, according to Berzelius, exerts in the form of pure starch or amylaceous fibre to the amount of 80 per cent in the Iceland moss (*Cetraria Islandica*.) This abounds in the mountain districts of the northern parts of our continent, although that kept in the shops is brought from Hamburg, and said to be the produce of Norway and Iceland. The *Irish moss* or carrageen, (*chondrus crispus*) is also found in all the northern parts of this country in quantities sufficient to supply the world. It abounds especially on rocks and stones on the coasts of Maine, Nova Scotia, Newfoundland, Labrador &c; although it is chiefly collected for dietetical and medicinal uses on the west coasts of Ireland, then washed, bleached and dried in the sun. We have also the *tripe de roche*, on which the Canadian hunters are often forced to subsist, a name given to several species of *gyrophora*. The reindeer moss which furnishes the winter food for that animal, is the *cenomyce rangiferina*. We have also the *alaria esculenta*, which is eaten by the coast population of the north of Ireland and Scotland; also, the *rhadymentia palmata*, the *dulse*, of the Scotch and the *dillisk* of the Irish.

We have seen this plant in the west of Ireland forming the chief relish to his potatoes that the coast peasant enjoys. But its use is by no means confined to the poor but extends to individuals of all classes. It may be seen exposed to sale in the fruit stalls in the towns of Ireland, and may be seen in similar places in the Irish quarters of New York. In the Mediterranean, it forms a common ingredient in soups, and during the famine years in Ireland, M. Soyer attempted to teach this use of it to the Irish; but they could never learn to like it cooked, unless, perhaps, fried.

The chemical composition of these lichens shows the same constituents. The *cetraria*, for example, in 100 parts yields

Green wax, - - - - -	1.6.
Yellow extractive, - - - - -	7.0.
Bitter matter, - - - - -	3.0.
Uncrystallizable sugar, - - - - -	3.6.
Gum, - - - - -	8.7.
Starch, - - - - -	44.6.
Starchy skeleton, - - - - -	36.2.
Gallic acid, - - - - -	trace.
Salts of potash and lime - - - - -	1.9.
Total, - - - - -	101.6.

The bitter *principle* (*cetrarin*,) exists in all the above genera. The *chondrus* yields in 200 parts:

Vegetable jelly, (<i>carragenin</i>) - - - - -	79.1.
Mucus, - - - - -	9.5.
Two resins, - - - - -	0.9.
Fatty matter and free acids, - - - - -	traces.
Salts of soda and magnesia, - - - - -	2.0.
Fibre, water, &c., - - - - -	8.7.
Iodine and bromine, - - - - -	small quantity.

The *carragenin* is a peculiar modification of *mucilage*, and identical in composition with *starch* and *sugar*, (C^{12} , H^{10} , O^{10}) and by digesting a short time with dilute sulphuric acid, the whole plant is converted into sugar and gum. These substances are well adapted to cases requiring a nutritious and easily digested aliment, and a mild tonic not liable to disorder the stomach. They are accordingly used with considerable advantage in chronic affections of the pulmonary and digestive organs, as phthisis, chronic catarrh dysentery, dyspepsia, diarrhea, also, in rickets, scrofula, irritation, of the bladder and kidneys, and enlarged mesenteric glands.

We have also, indigenous to our rocky northern coasts, the

Porphyra vulgaris, and *P. laciniata*, which, in winter, is collected on the northern shores of Europe, and served up, after being boiled several hours, under the name of *marine sauce*, *slake*, *slouk*, or *sloucaun*. It is highly relished by many, eaten with lemon juice or vinegar, and even put up in hermetically sealed cans for use at sea at some of the British establishments for preserving fresh vegetables. This, like the other species, is antiscorbutic, and useful in scrofulous affections and glandular swellings; probably from the iodine it contains.

In preparing a *decoction* of any of these lichens, half an ounce should be macerated in cold or warm water for ten minutes, then boiled in three pints of water for a quarter of an hour and strained through linen. It may be flavored with sugar, lemon juice, orange peel, essence of lemon, or other aromatics, as cinnamon or nutmeg, to be used as a common drink.

A *jelly* may be prepared by adding sugar to the strained decoction and boiling down until the liquid is sufficiently concentrated to gelatinize on cooling. By adding milk instead of water, a *blanc mange* is obtained; flavoring ingredients to be employed as above. To separate the bitter principle, infuse for one hour in a weak solution of soda or potash, and repeat if any bitterness remains.

Trillium as a remedy in Flooding, Menorrhagia, and Leucorrhœa.

BY E. G. WHEELER, M. D.

ALTHOUGH my experience with the trillium is quite limited, yet, in the few cases I have treated with it, the effect has been so speedy and decided, that I have been led to the conclusion that it may be relied on as more prompt and certain in its action in suppressing uterine and vaginal discharges than any other known remedy.

The following cases, selected from some of the most prominent ones in which I have relied upon this article alone, may go to show, in some measure, its efficacy in these conditions.

CASE I. May 1, 1859.—Mrs. G., at the third month of pregnancy, was taken at 6 o'clock, A. M., with a bloody discharge from

the uterus, with pain in the back, considerable sickness at the stomach and occasional chills. I was called in at 9 o'clock, the same morning. The flooding had greatly increased during the last hour, and the patient fainted as I entered her room. The pains had ceased—os uteri dilated to about the size of a twenty-five cent piece, but rather tense. Loss of blood very great. I made a strong infusion of the trillium root and gave two table-spoonsful every ten minutes. In half an hour the bleeding had greatly diminished. The infusion was continued, but given at rather longer intervals, and in two hours from the time that I was called in, the hemorrhage had ceased altogether. Pains returned during the following night, and the foetus was expelled with but very trifling loss of blood.

CASE II. *March 7, 1860.*—Was called at 4 o'clock, P. M., to see Mrs. S., at the full term of pregnancy. Os uteri dilated to the size of a half dollar—no pains—flooding excessive. Administered the trillium as in the preceding case. It acted promptly, so that in an hour from the time of giving the first dose, the bleeding had entirely ceased. In about four hours more, labor pains came on, and she was shortly delivered of two healthy children, with no more than the usual amount of hemorrhage.

CASE III. *Oct. 7, 1860.*—Mrs. M., at about the third month of pregnancy, had been attended with slight uterine hemorrhage for two or three days previous. At 8 o'clock, in the evening of the day of date, she became alarmed from sudden and excessive flooding. I was immediately called in, but her fainting turns were so frequent and so protracted, that I could not give the remedy as fast as I desired; and notwithstanding I brought all the means to my aid that I could command, I greatly feared that I should lose my patient. In about three hours, however, she had taken an infusion made with about three drams of the bruised root, as nearly as I could judge, and the hemorrhage was perfectly controlled. Thirty-six hours after this, pains came on and the foetus was expelled with no further trouble.

It may not be amiss to state, in this connection, that I think I have found the remedy of decided utility in several instances in facilitating labor.

In cases of menorrhagia, as well as of leucorrhœa treated with trillium, the results have been very satisfactory.

The plant I have made use of is the *trillium atropurpureum*—abundant in the New England States, and probably a variety of the *T. erectum*.

Having thus briefly expressed my own views in regard to this plant, I beg leave to hope that other members of the profession who may have used it more extensively, and had cases under their care that would throw further light upon the subject, will have the kindness to communicate the results of their observations through the pages of the JOURNAL, as I consider it important that the remedial virtues of this, as well as of all other indigenous agents should be fully elucidated and established.

A Case of Precarious Menstruation.

By J. B. SOMERS, M. D., of Seaville, N. J.

I feel it not only a duty but a pleasure, Mr. Editor, to place within your hands an account (however imperfect it may be in detail) of a case that has recently been under my charge. It is that of a girl now nine years of age, who commenced to menstruate in the spring of '59, being then at the age of seven and a half years.

The case having afforded me no little interest, I doubt not that it will also be satisfactory to some of your readers. She commenced to menstruate in May, of the above year, having completed her seventh year the previous October, and continued thus to do until the following spring, when she became anæmic and dejected, and her menstrual flow suddenly ceasing. Upon the least exercise her respiration was greatly hurried, and ever likely to swoon upon the least excitement. Her pulse became enfeebled and appetite ceased. In this condition I found her, surrounded with friends filled with alarm, which, by the way, did not tend to lessen the excitability of her mind. She was placed upon the use of chalybeate preparations, stimulating food, and, with moderate out-door exercise, began immediately to amend. As amendment advanced, more vigorous exercise was demanded, and ere she had completed her ninth year she was as healthy and robust as any of her playmates. Her catamenia was restored as her general health improved, and that it may hereafter be well with her, she is "out on the ocean sailing." Although young, she has

the appearance of age, but in intellect as well as in years she is no more than a child. Her parents are of moderate circumstance, nor has she ever known in her country home those luxuries which parents in city life too often bestow upon their children. In this climate and under such circumstances, may I not ask are not such cases rare? nay, are they not almost unknown?

The cause being undoubtedly a preternatural development of the ovaries.

On the Use of Mullein (*Verbascum Thapsus*) in Chronic Bronchitis.

By H. WILSON, M. D., of Boonsboro', Maryland.

CHRONIC Bronchitis is universally admitted to be one of the most obstinate and difficult affections with which physicians have to deal. This difficulty proceeds more from the locality than the nature of the disease; more from a want of access to the mucous membrane of the bronchiæ, than from the absence of proper remedies to control the affection. Counter-irritation and the inhalation of chlorine, iodine, and expectorants, with such like means, have been used for centuries, but all physicians know, from experience, that the benefits derived from their use are merely temporary and palliative, and seldom bring about a radical cure; still they are the best remedies which we have at command, and it is but right that we should avail ourselves of their medicinal virtues. The long standing inflammation of the lining membrane of the bronchiæ seems to demand the contact and application of some powerful agent, in order to produce a new impression, and thereby change the morbid action of the part, before a healthy reaction ensues.

The successful introduction of the probang, armed with a sponge and nitrate of silver, as employed by Dr. Horace Green, of New York, into the larynx and trachea, has been a great triumph for American science, and peculiarly adapted to accomplish the desired result. By this means he has been enabled to apply cauterization to the diseased mucous membrane of the bronchiæ, and in a short time to destroy all traces of morbid inflammation. But how few are there that can do what Dr. Green has accomplished? The precise knowledge of anatomy and skillful manipulation of the probang, which are required to introduce that instrument through such a narrow opening as the rima glottidis, will induce most surgeons to pause before the attempt is made. If such men as Professors Erithsen, and Trousseau, with Dr. Marshall Hall, and other eminent European surgeons, declared that its introduction was an impossibility, without producing death, it can scarcely be expected that physicians and surgeons, who have but little opportunity of experimenting on the living or dead subject, would undertake such a delicate operation. It is, therefore, of little practical benefit to the majority of surgeons.

The frequency with which bronchitis is met among clergymen and others, renders the discovery and use of any means which may be servicable, either as palliative or curative, a matter of importance. For several years past I have been in the habit of using a remedy, which may not be new, but which far surpasses that of any other which I have tried in relieving, and, in many instances, entirely eradicating the affection. I refer to the leaves of the common mullein, (*verbascus thapsus*) dried, and smoked in a pipe. In that form of the disease in which there is a dryness of the trachea, *with a constant desire to clear the throat*, attended with little expectoration and considerable pain in the part affected, the mullein, smoked through a pipe, acts like a charm and affords instant relief. It seems to act as an anodyne in allaying irritation, while it promotes expectoration and removes that glutinous mucous which gathers in the larynx; and at the same time, by some unknown power, completely changes the character of the disease, and, if persevered in, will produce a radical cure.

In no respects are its beneficial effects more striking than in its power of immediately allaying the desire of "clearing the throat," which is a source of constant annoyance to the patient, and which is so apt to disturb his rest at night. The remedy needs but to be tried to prove its efficacy.

I will give two or three cases in point. A few months ago, the Rev. Mr. S., a minister, who had been preaching regularly for several years, came to my office and told me he shortly intended to discontinue his vocation, as he found it impossible to preach in consequence of a sore throat. He said he had been suffering for several years, and now found his health growing rapidly worse. He regretted the necessity very much, for many reasons. I examined his case, and found he had chronic bronchitis. He told me he had been constantly under medical advice, and had tried everything, but nothing had done him any good, and now he had become quite discouraged. I recommended to him the mullein, which he promised to give a faithful trial. In two months from that time he returned to me, looking the picture of health, and in fine spirits, and told me he felt entirely relieved. He said money could not induce him to part with the remedy. Wherever he goes he carries his pipe, though he has had no return of the disease.

Shortly after this case, I had that of a young lady, who had been suffering for two or three years. She had been under the care of an excellent physician. In addition to inflammation of the bronchiæ, which seemed inclined to extend to the lungs, her larynx and pharynx gave evidence of considerable inflammation. She was also annoyed with a constant hacking cough and a desire to clear her throat. The usual remedies had been tried in her case, but without any beneficial effect. In two weeks' time, by means of her pipe and the mullein, she experienced wonderful relief, and is now, to all appearances, convalescent. Her fears have been allayed and her health restored.

I, myself, for ten years, was a sufferer from chronic bronchitis. Every evening I became hoarse, and experienced great pain, dryness of the trachea, and a constant desire to clear my throat, which, in doing, not only disturbed my own slumbers but that of others. I tried cauterization of the pharynx as

low down as possible with argenti nitras, counter-irritation, expectorants, and inhalation, but all to no purpose; finally, I commenced the use of the mullein, and nothing could have been more speedy and efficient in affording relief. I would recommend its trial as the best means of testing its virtues.

The mullein may be gathered from almost any field at all seasons, and should be first dried, and the leaves smoked in a pipe like tobacco, at least two or three times a day. It is not unpleasant, and, unlike tobacco, requires almost constant smoking or drawing, or the fire will go out.

The remedy is simple and harmless, but potent. It is one of those means which nature has so bountifully supplied, which are within the reach of all, and is but an evidence that we need not resort to chemical combination for all our most valuable remedial agents; but, if we look around, we may find them at hand ready for application.

Report on Home Adulterations.

The Committee upon the subject of Home Adulterations, appointed at the annual meeting of this Association held in Boston last year, respectfully report:

The subject of Home Adulterations is one worthy of the careful consideration of every member of society, whether pharmacist, physician or consumer—and *all* belong to the latter class—because of the pernicious and often dangerous results which ensue from the use of articles mixed with deleterious substances, or deficient in power, owing to inert substances used to enhance the profit of the unscrupulous tradesman.

Your Committee feel deeply the responsibility of their duty; they feel that much ought to be said and done which they dare not take the responsibility, as individuals, of saying and doing. They trust that the time will come when State legislators, or the General Government, will cause such penalties to be affixed to the selling of adulterated articles that the business will cease to "pay," and that "honesty" will be practiced because it is "the best policy." During the past year your Committee have had many articles of drugs, medicines and food submitted to their examination, and they have felt more and more the necessity of some means being devised for checking this abominable practice, which, in the language of another, "is undermining the very foundation of trade, viz: faith in commercial integrity."

We refer to our published report in our last year's "Proceedings" for the definition of an adulteration as given by Dr. Hassall, of London, who has done more than any other to draw public attention to the alarming facts of this species of fraud. He says an adulteration consists in the intentional addition to an article, for the purpose of gain or deception, of any substance or substances, the presence of which is not acknowledged in the name under which the article is sold. The change of an article entirely, and selling it under a false name in place of another, constitutes a *substitution* and not an adulteration.

Thus briefly referring to the introductory of our last year's report, we would say that all the views we there express we still sustain. We have, during the past year seen nothing to cause us to change our opinion as to the dangerous and hurtful tendency of this unlawful practice; on the contrary, all our experiences confirm us in the views we there express, and tend to convince us more fully that the public do not know the extent to which they are cheated, nor would any intelligent community submit to the imposition were they once fully aware of the danger and risk they are exposed to.

Adulterations are practiced for three principal reasons, as briefly stated by the author of "Falsification of Food:"

First.—For the purpose of making the substance more salable, by improving its appearance by the addition of some body, either innocuous or otherwise.

Second.—To depreciate the quality by adding some substance which will diminish the *real*, without altering the *apparent* strength or general appearance. This is generally a very deadly fraud.

Third.—To depreciate quality and "extend" the quantity, by the addition of some simple substance, as water, or, if a solid body, as sand, gypsum, &c.

The matter of adulteration of articles of food is quite properly within the scope of a report on Home Adulterations; and your Committee propose entering somewhat largely into this part of the subject, trusting that the Association will grant them indulgence.

It is a sad and alarming fact that "death lurks in the pot;" that the community are exposed to injury, disease and death, by the very food they live upon, and the tea, coffee and water they drink.

It is often urged in deference to many of these nefarious practices, such as the addition of some of the salts of copper and lead, or cocculous indicus, to articles of daily consumption, that they are "used in *very small* quantities." We grant the statement to be true, and are deeply, we trust truly, grateful, as we ought to be, that we are not murdered outright, but scientifically and handsomely killed by inches.

Who can estimate the results of the continued introduction into the system, day by day, and month by month, of these poisonous additions to articles of food. No substance, however small its daily use, which is decidedly poisonous and pernicious, can be used without producing, finally, disease and even death.

Any physician can tell you of cases where the seeds of painful and lingering disease have been planted by some slow, insidious poison. All of you are doubtless aware that disease often arises from the use of water through lead pipes; and who can say that of the many cases of "unknown disease," some of them may not have been caused by poison taken in the small but oft-repeated doses of the daily food.

We are aware that many, and among them even those of scientific reputation, scout the idea of any trouble arising from water through lead, but your Committee feel that it is of such great importance that they cannot pass it by without a brief notice. It is a question upon which scientific men have differed; but with the present knowledge of the subject that we have, your

Committee can but recommend, in every practical case, the use of some other substance than lead for the conveyance of water to be used for drinking purposes.

Where so large a possibility of injury exists, prudence would dictate an entire avoidance of the danger.

One of your Committee has been fully convinced of the great danger attending the use of water through lead pipe. He has known lead to be taken from a portion of the liver of a person who died with every symptom of acute lead poisoning, and who was considered by the attending physicians to be a victim of lead disease.

The susceptibility of individuals to this poison varies very greatly; many persons apparently suffer no inconvenience, although subjected to precisely the same exposure which proves fatal to others.

One of the most striking cases of extreme susceptibility to this species of poisoning which has come to the knowledge of your Committee is the following:

A man aged thirty-five, who was a house-servant in the city, at the time of his sickness, had never been exposed to the influence of lead, as far as could be ascertained, previous to entering his place of service.

He was employed by a private family, consisting of persons both older and younger than himself, and who had drank the water through the lead pipe for several years, in fact, ever since the introduction of the water into the city, without the slightest apparent injury. The man referred to, was from the country, and perfectly healthy and strong, upon his arrival in the city; he was a fleshy and robust man, and never had noticed any indications of paralysis.

He had been in his situation as servant, exposed to lead poisoning in no other way than drinking the same water that the family used, only three months, before he was attacked with violent symptoms of lead paralysis, without the premonitory symptoms of colic.

He was *completely* paralyzed, excepting the muscles of respiration and the heart.

Even the muscles of the eye-lids were useless, and the "blue line" upon the gums was apparent, which is the well known and usual attendant upon cases of lead-poisoning.

Under treatment of iodide of potassium he completely recovered.

If such serious results *can* occur, is not the matter one worthy the attention of those who have in charge the public health.

The singular mode in which the lead is sometimes introduced into the system, also calls for care and watchfulness, to prevent the unknown and therefore unsuspected danger.

One of the members of your Committee was called upon by a physician who had a patient, a farmer, suffering apparently from lead poison, to make an analysis of some cider. From what source the lead was taken was a mystery. The water used by the family was all drawn by an old-fashioned "well

sweep" and bucket; no possibility seemed to exist that lead *could* be the cause, and yet all the symptoms were those of a plainly marked case of lead-poisoning. The attending physician finally thought of the cider which the farmer was in the habit of drinking, and as a matter of extreme precaution decided to have a portion of it analyzed. From less than two quarts of that cider, metallic lead was obtained in substance sufficiently large to hold in the hand and prove its nature beyond question.

This caused an examination of the cask of cider and from the bottom of the cask, upon draining off the cider, was taken a pint bowl full of mixed sediment and white lead.

This, of course, readily accounted for the farmer's lead disease. The cask used had formerly been filled with oil, and in putting it together the edges of the staves had been plentifully coated with lead, ground in oil, before driving the hoops, to prevent the possibility of leakage, afterwards when used for cider, the lead was dissolved out and the serious consequences followed.

These instances, taken from many, are given to show that those who speak and feel warmly on this subject of lead-poisoning, do have some reason for their opinions and feelings.

We are aware that this is not strictly an adulteration, but certainly, after all that has been said and written upon this subject, those who, being aware of the facts in the case, and who could avert the danger, go on deliberately using lead pipes for drinking waters, place themselves in the situation of the man who sets spring guns, and gets shot himself. When lead pipes are used in preference because they are "cheaper" than gutta percha, block tin or iron, does not *this* constitute an adulteration of the water?

We are led to speak of this subject of lead water, perhaps going beyond the limits which the Association have laid down for our Committee, by having met with, and known many instances, where sad trouble has been produced by this often despised cause.

The next article we would ask your attention to is Milk:—

During the past year it has been the duty of one of your Committee to analyse a large number of specimens of milk. As many of you are aware, there exists a statute in some States regarding the sale of adulterated and unwholesome milk, and by virtue of that statute an Inspector of Milk is appointed by the authorities.

During the past year a large number of specimens have been analysed at the request of the Inspector of Milk for the city of Boston. With but one single exception, every specimen was found to be adulterated, many of them very largely.

The plan adopted has been to compare the amount of food contained in any milk examined, with that which, by the analysis of a very large number of specimens of pure cow's milk, was found to be the *average* amount. The amount of food being ascertained in any given specimen, it is easy, by comparison, to find the relative worth of the sample to the standard, and thus ascertain the dilution with water.

The amount of milk-sugar and salts was also estimated, and the difference between the weight of the Milk started with, and the sum of the weights of the food, milk-sugar and salts gave the weight of the water in any sample analysed. The amount of water which any milk contained, was not made the basis of comparison at all; the addition of water to milk decreases in a much larger degree the worth of the milk as a food yielding fluid, than it increases the *percentage* amount of water, and as the amount of *food* really constitutes the value of the milk, the analyses were placed on this alone.

Water is the principal adulteration of milk; but to conceal this fraud and destroy the "skim milk" appearance, recourse must be had to several other adulterations, as the addition of coloring matter, salt, etc., to increase the weight and improve the flavor, both which it does, the latter quite remarkably.

Sometimes poor milk, from cows that should not be milked at all, owing to their condition, is mixed with that sent to market. It is only by microscopical examination that this unwholesome and unclean milk can be detected. Specimens of this kind have been met with during the past year.

From the experience one of your Committee has had, he does not hesitate to say that the adulteration of milk is largely and systematically carried on. Who can judge of the amount of sickness caused to children by the use of this unwholesome and oftentimes poisonous food—poisonous, because decomposition has already commenced?

Much of the sickness among young children in many large cities may be fairly attributed to the bad and unhealthy milk which they almost of necessity receive; and to the poorer classes, those less able by other reasons to contend with such a diet, the greater portion of this milk is given.

The milk oftentimes is not served to consumers until the second day after it is taken from the cow, owing to its being transported long distances, and when diluted with water the process of decomposition is much more rapidly set up.

Tannin as Antidote to Strychnine.

By PROF. KURZAK, of Vienna.

From want of a reliable antidote, the treatment in cases of poisoning by strychnine hitherto consisted principally in endeavouring to evacuate the poison, to combat the frightful spasmodic symptoms by narcotics, and to re-establish respiration, when finally ceased, by artificial means. Donne proposed iodine, chlorine, and bromine as antidotes to strychnine; Garrod, Rand, Morson, and Falck recommended prepared animal charcoal; but the efficacy of these substances has been neither tested sufficiently by experiment nor proved by experience. The same is true in regard to tannin, and the astringent vegetables containing it, their infusions, decoctions, &c. Although

they recommended themselves by the fact that tannin forms chemical compounds, insoluble in water, with strychnine and other poisonous alkaloids, it seemed very probable that these products might be redissolved in the stomach and intestines, and thus be rendered capable of absorption; the virtue of tannin as an antidote to strychnine was, therefore, considered very doubtful.

With a view to subject this matter to a thorough examination, and to ascertain the efficacy of tannin in preventing and allaying the symptoms of poisoning by strychnine, Professor Kurzak made a series of experiments on rabbits and dogs. At the end of his interesting and highly important memoir, he states that the results of his investigation permit him to draw the following conclusions:—

1. *Tannin*, if administered in time, is an excellent *chemical antidote to strychnine*.

2. The doubt, whether the precipitate formed by tannin in a solution of strychnine, although insoluble in water, would not be redissolved by the gastric and intestinal juice, and the strychnine thus reobtain its poisonous properties, is solved by these experiments on rabbits and dogs in a complete and highly gratifying manner.

3. The successful results in dogs and rabbits justify the expectation that *tannin would suspend the poisonous action of strychnine also in man*, even in cases where the evacuation of the tannate of strychnine, formed in the stomach could not be accomplished.

4. These experiments show that *twenty to twenty-five times the quantity of tannin is required in order to suspend the poisonous action of strychnine*. In cases of poisoning it will be, however, advisable to administer a relatively larger proportion, as a part of the antidote will be absorbed by the usual contents of the stomach, particularly by gelatine.

5. As tannin has proved to be an antidote to nitrate of strychnia, which is much more soluble in water, there is so much greater reason to hope that it will be successful in poisoning by pure strychnia which dissolves in water with great difficulty.

6. *The same successful result* is to be expected from its administration in poisoning by the hard and tough *nux vomica*, which imparts the poison to aqueous fluids, but gradually and not very rapidly.

7. Tannin is a so much more valuable antidote in poisoning by strychnine, as *galls* in which it is contained can be readily procured, and thus be administered without much loss of time, They are easily reduced to a powder, which is given mixed with water. Another advantage is obtained by the vomiting which it is liable to produce. In the mean time, an *infusion or decoction* of powdered galls may be prepared.

On an average, Turkish galls contain fifty, the Illyrian galls twenty per cent. of tannin. At least one drachm of the former and two drachms and a half of the latter are therefore required to neutralize one grain of strychnine introduced into the stomach, but in general, especially if there is vomiting, a much larger quantity should be administered.

8. Another readily obtained substance containing tannin is *Chinese tea*, the efficacy of which, in poisoning by strychnine, is confirmed by our experiments. But these experiments (VII. and VIII.) have also shown that, in a decoction of tea-leaves, we cannot count upon the whole amount of tannin contained in them. In poisoning by a larger dose, it would therefore be necessary to administer so large an amount of green tea that the antidote itself might produce poisonous effects. One decigramme (1.3 grain) of nitrate of strychnine requires, as our experiments prove, ten drachms (600 grains, 40 teaspoonfuls) of green tea, which, according to Peligot's analysis, contain about fifteen grains of caffein. Tea is therefore applicable only in poisoning by smaller doses, but may otherwise be useful as adjuvant.

9. The efficacy of *roasted coffee* as chemical antidote to strychnine seemed to be much inferior. The amount of *caffeo-tannic acid* contained in coffee is, according to Payen, 3.5 to 5.0 per cent. But our experiments (IX., X., XI.) show that the decoction evidently contains a much smaller quantity of undecomposed tannic acid than this per-centage would justify us in assuming. The decoction of 180 grains of roasted Cuba coffee (being adequate to 200 grains of the raw coffee, which should contain at least six grains of tannic acid) produced, according to the ninth experiment, merely a delay and diminution of the poisonous effect of 0.13 grain of nitrate of strychnine. In the tenth and eleventh experiments, 300 grains of raw coffee, which weighed, after roasting, 267 and 264 grains, and should have contained at least nine grains of tannic acid, had furnished a decoction which, as antidote to 0.13 grain of strychnine, was nearly inert, only delaying the appearance of the symptoms for a little while.

10. From *unroasted coffee*, so inconsiderable an amount of tannin is extracted, by boiling, that the employment of its decoction for our purposes is out of the question.

11. *Oak bark* (of *Quercus robur* and *Q. pedunculata*) contains, according to Gerber, 8.5 per cent. of tannic acid, and imparts it readily to aqueous fluids. It deserves attention in poisoning by strychnine so much the more, as it can be procured without much delay, especially in the country. What has been said about the administration of galls equally applies to the use of the powder and decoction of this bark.

12. On account of their frequent occurrence and the large amount of tannin they contain, we have to mention in this connexion: *acorns* (from *Quercus robur* and *Q. pedunculata*) with 9 per cent., the *bark of the horse-chestnut* with 8 per cent., *willow bark* with 5½ per cent., and the *green hull of walnuts*. The *radix tormentillæ* (with 17 per cent.), *rad. caryophyllatæ* (with 31 per cent.), and *rad. bistortæ*, are still rich in tannin, but can rarely be procured without much loss of time.

13. The solubility of precipitate produced by tannin in a solution of strychnine, by *acetic*, *citric*, and *tartaric acid* (vide experiments with the same), show the necessity of avoiding vegetable acids during the treatment of poisoning by strychnine with tannic acid.

14. The same applies to the internal use of *alcohol and alcoholic remedies*.

15. The reported experiments with rabbits have sufficiently proved that more active voluntary movements excite the spasms usually produced by strychnia, even when they otherwise would not have made their appearance. In treating cases of poisoning by strychnine, *it is therefore highly important to prohibit as much as possible all voluntary movements, and to avoid violent excitement of any other kind.*—*Zeitschrift der K. K. Gesellschaft der Aerzte zu Wien*, March 12, 1860.

Camphor as an Antidote to Strychnine Poisoning.

In the *Pacific Medical and Surgical Journal*, for June, Dr. M. T. Dodge reports a case of poisoning with strychnine, entirely relieved by the administration of camphor. According to the report, *five grains* of strychnine had been taken *three hours previously*. Ten grains of camphor were given in emulsion, and repeated every half hour or hour for seven hours, when the spasms entirely ceased, and the patient rapidly recovered. It would certainly be a fortunate discovery should camphor be found to be a reliable antidote to the poisonous action of strychnine. The case reported lacks at least two essential points to make it available as proof upon this point. It is thought by many that much of the strychnine in use is nearly inert, and, if taken as claimed, there is no proof that the article was genuine. More than this, there is no proof, but the patient's statement, that the five grains of strychnine had been taken at all. There is certainly one suspicious fact in the case, that must in some measure detract from our confidence in the antidotal power of camphor. *Three hours* had elapsed from the taking of the poison before remedial aid was had, and yet the patient was sitting up, and presented no very alarming symptoms. Prof. Wood says that, in cases of poisoning from strychnine, the alarming symptoms usually follow the administration in from ten minutes to half an hour. One of two things is evident: the five grains were not all taken, or the poison was not of standard strength; either would effect the result, so far as relates to the antidotal powers of camphor.

TREATMENT OF LEUCORRHOEA.—In leucorrhœa from chronic stasis of the uterus, without considerable textural changes, and in the absence of syphilis, Dr. Pockels has for a long time past administered with great success *secale cornutum* and *catechu*, giving of each as much as will lie on the point of a knife three times a-day—the *catechu* being as serviceable as the more expensive tannic acid. If there is *anæmia*, phosphate of iron is added, and *alkalies*, when acidity of the stomach prevails. An increased secretion of the mucus is at first produced, and this may have some blood mixed with it, when chronic hyperæmia is present.—*Varge's Zeitschrift*, band xiv. p. 7.

THE PHARMACEUTICAL ASSOCIATION.

THURSDAY MORNING SESSION.

THIRD DAY.

THE time fixed yesterday for discussing the subject of the next place of meeting having arrived, a motion was made by William J. M. Gordon that the next meeting be held in Cincinnati.

A letter from the St. Louis Pharmaceutical Association, signed by its officers, was read, inviting the Association to hold its next meeting in St. Louis.

After considerable expression of sentiment, the motion of Mr. Gordon was amended by the substitution of the words "St. Louis" for "Cincinnati," and was carried unanimously in the following resolution :

Resolved, That the next annual meeting of the American Pharmaceutical Association, shall be held in the city of St. Louis, at 8 o'clock, on the fourth Wednesday in August, 1861.

Frederick Stearns offered the following :

Resolved, That a committee of nine members be appointed to correspond with the leading pharmacutists of the western cities, inviting their attendance at the next annual meeting in St. Louis, and if possible to organize excursion parties to start from the Atlantic cities for that purpose.

Which was adopted.

On motion, it was resolved that when we adjourn, we adjourn to meet this afternoon at half-past three o'clock,

The reading of scientific papers was again resumed.

Query 37. On the essential oil of Sassafras, not having been answered, was continued to A. P. Sharp for another year.

Query 38. On Pink Root and Senega, was continued to L. F. Dohme for another year.

Query 39. On the American species of *Cantharis*. A letter was read from S. Chapman Hill, to whom this query was referred, giving satisfactory reasons for not having replied to it, and asking for its continuance to him for another year, which was granted.

Queries 40 and 41 received no reply, and were passed by.

Query 43. Dr. Squibb to whom this query was referred, made a verbal reply, based on his experience, but had not been able to produce a figure of apparatus that he felt satisfied to offer to the Association.

Query 44. In regard to the best form for a pharmaceutical still for the apothecary, &c., was continued to Dr. Squibb for another year.

Query 29. On Lupuline and Hops, was now read by Charles A. Tufts, and referred for publication.

The Executive Committee now reported the following names as candidates for membership, viz :

Giles D. Simms, of Washington, D. C.

George Buck, of Chicago, Illinois.

Abram Alberger, Jr., Philadelphia.

George W. Mowbray, New York city, New York.

A ballot was ordered, and the gentlemen were all declared to be elected.

Query 27. On the depreciation of Smyrna Opium, was answered by P. Wendover Bedford. Interesting comments were made on this subject by Dr. Squibb, Edward Parrish and others.

Query 42. On Theobroma Cacao, was answered in a lengthy paper by Dr. Donnelly, describing the history, botany, culture and manufactured products of Cacao, a portion of which he read.

On motion, the paper was accepted by the Association, and referred to the Executive Committee.

The following additional members signed the register, either during this or the subsequent sittings, and are all presented together for convenience:

Lester S. Hubbard, Brooklyn, N. Y.	J. Lindley Pyle, Brooklyn, N. Y.
C. Shivers, Phila., Pa.	William Ball, New York City.
G. W. De la Vergne, N. York City.	George M. Mowbray, "
Frederick Stearns, Detroit, Mich.	Augustine Presenger, "
E. Donnelly, Phila., Pa.	Geo. W. Southwick, "
Matthew F. Ash, Jackson, Miss.	Richard Forester, Brooklyn, N. Y.
Charles A. Heinitch, Lancaster, Pa.	Peter D. Leys, " "
Evan T. Ellis, Phila., Pa.	George C. Leys, " "
Wm. M. Somerville, New York City.	Wm. H. Page, " "
F. V. Heydenreich, Brooklyn, N. Y.	Otto Lais, Jr., New York City.
Henry Q. Mack, New York City.	Th. Schumann, "
Gustavus Ramsperger, New York City.	

On motion, adjourned.

THURSDAY AFTERNOON SESSION.

The meeting was called to order by President Kiersted.

Query 34. On the best method of keeping camphor in the form of powder, was answered by a paper from Henry D. Fish, who presented a form of the powdered camphor.

The President announced the following gentlemen as constituting the Committee of nine, called for by the resolution of Frederick Stearns, in relation to obtaining a larger attendance at our next annual meeting:

S. M. Colcord, Boston.	John Meakim, New York.
Edward Parrish, Philadelphia.	F. Stearns, Detroit.
E. O. Gale, Chicago.	Wm. J. M. Gordon, Cincinnati.
Geo. W. Weyman, Pittsburgh.	John Thompson, Sumter, S. C.
W. H. Peabody, Buffalo, N. Y.	

Query 35. On the Guarana of Brazil. Henry F. Fish reported that he had not been able to obtain guarana in time and in sufficient quantity to prepare his essay, and asked to read an essay on "Coca" instead, as an analogous subject. This being approved, he read the paper, which was referred to the Executive Committee.

Volunteer papers were now called up by the Business Committee.

Dr. Wilson H. Pile, of Philadelphia, read a paper on the Dicas Liverpool hydrometer, an instrument for ascertaining the proof of alcohol, and exhibited one of the instruments to the meeting. The paper was referred to the Executive Committee.

John Faber, of New York, read an interesting paper on "Manufacturing Pharmacy," as it might be developed in the apothecary's store. The views given in the essay were advocated by Dr. Squibb and Edward Parrish. Dr. Squibb also remarked on the tendency that selling manufacturers' galenical preparations had to reduce the profession of pharmacy to mere shopkeeping trade. Mr. Stearns also advocated these views.

The Committee appointed to audit the Treasurer's account, reported that they had discharged their duty, and find that the balance of cash to be passed to debit of Treasurer's account, for the current year, amounts to eighty-one dollars and thirty-nine cents.

Edward Parrish presented a living specimen of the Benne plant, from the garden of F. Brown, at Burlington, N. J., illustrative of a paper on the culture of Benne as an Agricultural product for its seed and oil. He also exhibited and explained a new gas furnace, peculiarly adapted to evaporation, and, by an additional contrivance, to processes requiring high temperature.

It was moved and carried, that when we adjourn it shall be till to-morrow morning at 9½ o'clock.

The Executive Committee having recommended the name of Wm. H. Page, of Brooklyn, N. Y., as a candidate for membership, a ballot was ordered, and his election was reported by the tellers.

William Proctor, Jr., Chairman of the Committee on Subjects for Investigation the ensuing year, reported a list of queries, with the names of gentlemen accepting them, which was read, and the report left open for further additions, when the Committee should report finally.

On motion, the subject continued last year to Henry A. Tilden, on the comparative value of foreign and indigenous narcotic plants, was, in compliance with the request of that gentleman in a letter to the Association, continued to him another year.

Frederick Stearns offered the following:

Resolved, That this Association will not accept any report or scientific paper, written by a member or contributed by one not a member, which has been previously printed and distributed.

Which was adopted.

The Business Committee reported the possession of a paper received from John L. Kidwell, of Georgetown, D. C., being a list of medicinal and useful Plants procured by the Agricultural division of the Patent Office."

On motion, the paper was read, accepted and referred to the Executive Committee.

John M. Maisch then read a paper on Narcotic Fluid Extracts, which, on motion, was accepted, and referred to the Executive Committee. The paper

was accompanied by specimens of the fluid extracts of Belladonna and Hyoscyamus by the process it recommended.

The same gentleman read a paper on Hydrobromic Acid, which was accepted and referred as usual.

On motion of Dr. Squibb, the following "Committee on Home Adulterations" was appointed by the Chair, viz:

Charles T. Carney, Boston, Chairman.

John D. Dix, New York.

Joseph Laidley, Richmond.

William Proctor, Jr., Philadelphia. Charles A. Junghanns, Cincinnati.

George W. Andrews, Baltimore.

After some discussion on the propriety of offering prizes for papers to be read next year, on motion, adjourned to 9½ o'clock, to-morrow morning.

FRIDAY MORNING SESSION.

FOURTH DAY.

The meeting was called to order by President H. T. Kiersted. The minutes of last session were read, corrected and adopted.

The Executive Committee offered the names of the following gentlemen as candidates for membership:

Alexander Blake, New York City. J. Weaver, New York City.

A ballot was ordered; John Meakim and Evan T. Ellis, acting as tellers, reported their election.

Dr. Squibb, of the Business Committee, called for the reading of the biographical paper on Sir Henry Cavendish, which was proceeded with by the author, Henry F. Fish. It spoke of the parentage and education of the distinguished chemist and discoverer, and gave anecdotes of his eccentricities, etc.

On motion, the paper was accepted by the Association and referred to the Executive Committee.

Dr. Squibb, from the Business Committee, offered the following preamble and resolution:

WHEREAS, The subject of legal restraint for curtailing the sale of poisons is at present much agitated in some States of the Union, and appears to be attracting universal attention: *And Whereas*, This Association has always regarded this important subject as one of the reformations most desirable between pharmacutists and the public: *And Whereas*, Several bills have been enacted and proposed for the purpose of effecting the desired object, neither of which entirely meets the approval of this body: therefore,

Resolved, That the judgment of this Association be now had upon the subject, and that thereon a committee of three be appointed to mature a plan by which the objects may appear to be best attainable,—that committee to report at the next session of the Association.

Dr. C. B. Guthrie made an eloquent address on the subject of the resolution, alluding to the difficulty of deciding who were responsible physicians, to the odium unjustly resting upon the apothecary, when cases of poisoning occur, and the necessity of deciding who are and who are not genuine apothecaries.

Isaac Coddington said that the law restricting the sale of small quantities of

poison, by rendering the purchase of larger quantities easier, would prove more dangerous by causing persons to buy the larger amount overlooked by the law, and lay aside the unused portion where it might be mistaken for culinary articles.

Dr. Squibb deprecated the enumerating of poisons, in the laws restraining thereof, which are not used for murderous purposes, such as cyanide of potassium, cannabis indica, cantharides, essential oils, &c. He also referred to absence of laws protecting the public from incapable practitioners of medicine and pharmacy, and of those protecting such as are capable. The framers of the laws in attempting to cover too much ground have failed to cover the chief point of difficulty.

Dr. Percy of New York, was introduced to the Association by Dr. Squibb, and was, on motion, invited to address the Association. He spoke of having aided in drawing up the bill submitted to the New York Legislature, which was quite different from that now the law, only two sections of the former having been passed, yet he considered so far as requiring a registration of sales it would prove useful. The original bill required that every person who sold poisons should be licensed to do so,—the fee to be fixed upon at a nominal price. This would make every authorized seller of poisons known to the officers of the law, and thus facilitate the detection of the guilty. The object of the law was not for preventing suicide, but to detect the murderer and abortionist; and, in so far as it did this, it would prove useful.

Edward Parrish expressed himself as favorable to such regulating laws, but too many substances had been restricted. He referred to the decision of the Pharmaceutical Society, that the only safeguard was in the character of pharmacutists and those selling poisonous substances. Apothecaries, in his opinion, saved thousands of lives by their vigilance, and were often blamed undeservedly.

Dr. Guthrie remarked, that if you start with protection to the apothecary, you make it an incentive to young men to properly qualify themselves and take a regular collegiate course, and not be levelled with grocers and dry goods dealers, as mere traders; and that such protective laws are the kind wanted.

Dr. Gardiner, of New York, being introduced, thought it injurious to have laws which cannot be carried out; the New York law he considered to be in that category; that conscientious men in the business were the best safeguard. Any man may set up for a doctor and obtain articles for criminal purposes, and the present registry law can be easily evaded and is futile. He also recommended the idea that physicians should be careful to send their prescriptions to qualified apothecaries.

Charles A. Junghanns, of Cincinnati, was in favor of the Association making the best draft of a law for the purpose that can be effected as a primary step.

W. J. M. Gordon stated that the Ohio law required arsenic to be colored before being sold.

Dr. Bachelder, of New York, thought that the present New York law was somewhat beneficial, but was easily evaded.

John Meakim believed the difficulty lay at our own doors; we were too unwilling to act vigorously in the matter.

Charles T. Carney believed the law should restrict the sale of very few poisons, and that *some* State law would be acceptable to most pharmacutists. He had entirely declined the sale of some leading poisons in his own store.

Frederick Stearns considered that no law could be framed of any practical results, and that in such laws, if passed, poisons should not be specified, but generalized.

W. J. M. Gordon was opposed to the views of F. Stearns in regard to generalizing the expression of the law, which he believed should specify the most usual poisons.

W. Proctor, Jr., remarked that the laws usually passed to regulate the sale of poisons were more for the protection of the public than for the relief of the apothecary; that the Pennsylvania law does not limit the sale of poisons, but compels the registration of five kinds, viz: arsenic, strychnine, morphia, corrosive sublimate and prussic acid when sold by retail; that this law could and should be carried out by regular apothecaries, and would thus far prove useful in tracing purchases with evil designs.

Dr. Percy agreed with Prof. Proctor, that the use of the law was chiefly in affording the means to discover who had bought and sold poisons, and thus aid the cause of justice.

The question on the preamble and resolution of Dr. Squibb being called for, a vote was taken, and they were adopted.

Edward Parrish offered the following:

Resolved, That the Executive Committee be directed to forward copies of the Proceedings, including those of previous years, as far as practicable, to the various pharmaceutical and chemical societies and colleges in this country and Europe, with the request for exchanges.

It was moved to amend the resolution by including the editors of the leading newspapers, which on being put to vote was lost.

The resolution was then voted for, and was adopted,

William J. M. Gordon, of Cincinnati, offered the following:

Resolved, That this Association tender their heartfelt thanks to the New York College of Pharmacy, and to the druggists and pharmacutists of New York, who have contributed to the comfort and entertainment of its members during the present sessions.

Which was unanimously adopted.

Dr. Squibb, on behalf of the Business Committee having informed the Association of the remaining business claiming attention, considerable discussion ensued on the propriety of now entering upon the subject of weights and measures; which, on motion, was taken up.

The following preamble and resolution offered by the Business Committee were read, viz:

WHEREAS, It is the judgment of this Association that a change in the official tables of weights and measures is desirable and expedient; And whereas, it is understood that the final Committee of Revision and Publication of the U. S. Pharmacopoeia have as yet come to no action upon this subject; therefore,

1 *Resolved*, That it is expedient and proper for this Association, at this time, to offer its judgment upon this important subject.

2 *Resolved*, That the change of weights recently adopted in the Committee of the Council for consolidation and revision of the British Pharmacopœia, by which change the table of avoirdupois weight is adopted, with a new division of the avoirdupois ounce into 480 parts to be called grains, meets the approval of this Association, and is recommended for adoption in the National Pharmacopœia.

The vote being taken on the preamble it was adopted.

The first resolution was also adopted.

The second resolution was read again, and its tendencies explained by Dr. Squibb, and views were expressed by various members on the subject. After a great deal of discussion, in which the majority were opposed to the resolution, the motion to adjourn till 3½ o'clock prevailed.

AFTERNOON SESSION.

The meeting was called to order by the President.

The Chairman of the Committee on Questions for Investigation, &c., read the conclusion of the report, which was now on motion adopted in full, and is as follows:

The Committee appointed to prepare a list of subjects for next year, report the following, viz:

1. Is mercury volatilizable by heat without losing its narcotic properties? If not, how are the narcotic effects of opium smoking accounted for?

Accepted by William Proctor, Jr., of Philadelphia.

2. Cerate made with Japanese wax is said to acquire a dark color. Is this change a necessary consequence of the use of that wax? and what is the real value of that substance in Pharmacy?

Accepted by Thomas A. Lancaster, of Philadelphia.

3. To what extent can oil of benne (ol. sesami) be substituted for olive oil in Pharmacy?

Accepted by James T. Shinn, of Philadelphia.

4. What are the probabilities in favor of tartaric acid and tartar becoming commercial products of the wine culture of the Ohio valley?

Accepted by W. J. M. Gordon, of Cincinnati.

5. Can the root of Aconitum napellus be economically produced in the United States, and does it possess the activity of the imported drug derived from that plant?

Referred to Henry A. Tilden, of New Lebanon, N. Y.

6. Arsenical pigments;—are they as extensively employed, and with such poisonous effects as has been asserted?

Accepted by Benjamin J. Crew, of Philadelphia.

7. Is there a permanent solvent for cantharadin that will retain it in a liquid state in pharmaceutical preparations?

Accepted by Wm. R. Warner, of Philadelphia.

8. Garancin. What is the best process for obtaining it, and the best method of testing its purity as found in commerce?

Accepted by Benjamin J. Crew, of Philadelphia.

9. Is there a principle in Chenopodium anthelminticum analogous to santonin?

Accepted by James Bulmer, of Baltimore.

10. Is there a crystalline active principle in capsicum? or does it owe its activity to soft resin?

Accepted by Frederick L. John, of Philadelphia.

11. What are the advantages, if any, of Conium seeds for making the Tincture of Conii, as regards uniformity of medicinal strength, and increased power, compared with the leaves? *Accepted by Henry F. Fish, Waterbury, Conn.*

12. Has the resinoid principle of colocynth, extracted by alcohol, a reliable and constant therapeutic power? and may it advantageously be employed in medicine? *Accepted by John Faber, of New York city.*

13. The oil wells of Western Pennsylvania—the quantity and quality of oil they afford at present, their prospective value, and the geological character of the formation where the oil is deposited?

Accepted by George W. Weyman, of Pittsburg.

14. Does wood creosote exist in the market? to what extent compared with coal tar creosote or carbolic acid? and what are the objections, if any, to the substitution of the former by the latter substance in medicine?

Accepted by Charles Bullock, of Philadelphia.

15. Cotton seed oil, the expressed oil obtained from the seeds of *Gossypium herbaceum*, being easily obtained, and at a low rate:—Are there any therapeutic objections to its being substituted for olive oil, in pharmaceutical preparations?

Accepted by Wm. J. Watson, of New York city.

16. Is propylamin the principle in Ergot that influences uterine contraction; and if so has the propylamin of commerce derived from herring pickle, a like power?

Accepted by E. Donnelly, M. D., of Philadelphia.

17. Is there a test for the therapeutic value of extract of *Cannabis Indica*, based on the chemical behavior of its resin, that may be relied upon to distinguish the active from the inert drug?

Accepted by Wm. Proctor, Jr., of Philadelphia.

18. It has been alleged that commercial honey is sometimes largely adulterated with artificial grape sugar syrup, and ordinary syrup. Is this true—where, and to what extent is it carried on, and how may the adulteration be detected?

Accepted by Frederick L. John, of Philadelphia.

19. What is the most eligible manner of dispensing Phosphorus, for internal use?

Accepted by John Faber, of New York city.

20. Is the sedative action of *Veratrum viride* due to the veratria known to exist in it, or is there another principle contained in it to which that power is due?

Accepted by George J. Scattergood, of Philadelphia.

21. *Copaiba*. What are the botanical sources of this drug as at present furnished to commerce? and what is its present commercial history?

Referred to Prof. Joseph Carson, of Philadelphia.

22. What is the actual condition of the cod liver oil production and trade, in the United States?

Accepted by E. M. Blatchford, of Rockport, Mass.

23. Is the present wholesale production of sugar-coated pills advantageous to the interests of medicine? If not, what are the objections to it? What are the best processes for coating pills with sugar, gelatin and other substances, for extemporaneous use, by the dispenser of prescriptions?

Accepted by Frederick Stearns, of Detroit, Mich.

24. Does the root of *Convolvulus panduratus* contain a glucosidic resin analogous to Jalapin, and has it cathartic properties?

Accepted by L. M. Lemberger, of Lebanon, Pa.

25. What is the value of *Chelidonium majus* as a source for sanguinaria, compared with *Sanguinaria canadensis*?

Accepted by P. Wendover Bedford, of New York city.

26. What is the tonic value of the indigenous astringents of the United States, for medicinal and other purposes?

Accepted by Wm. R. Warner, of Philadelphia.

27. Can Phospho-molybdic acid, as a reagent for alkaloids, be made available as a test for the strength of narcotic extracts?

Accepted by Ferdinand F. Mayer, of New York city.

28. What are the statistics of the trade in castor oil, as regards locality and amount of production of the beans, and the preparation of the oil?

Accepted by Frederick F. Mayer, of New York city.

29. To what proximate principle does the marc of castor oil beans owe its activity as a purgative?

Accepted by Wm. R. Warner.

30. What is the true botanical source of "Southern prickly ash bark?"

Referred to Dr. Robert P. Thomas, of Philadelphia.

31. The subject of New remedies, with reference to their effect upon the progress of pharmacy, and their educational influences upon pharmacutists.

Accepted by Edward Parrish, of Philadelphia.

32. Anilin dyes—the history of the discovery and production of these coloring agents, and their probable influence on the decorative arts.

Accepted by George W. Weyman, of Pittsburg, Pa.

33. An essay on tartaric acid, and the medicinal tartrates, in their chemical and pharmaceutical relations.

Accepted by John M. Maisch, Philada.

34. Is the tomato available as a source of citric acid for the supply of commerce, and has the seed of this fruit any medicinal power?

Accepted by Thomas A. Lancaster, of Philadelphia.

35. Are the "Spirits" of the Pharmacopœia better when made by distillation, than the preparations made by dissolving the respective volatile oils in alcohol?

Accepted by Thomas Wiegand, of Philadelphia.

36. What course should be adopted by pharmacutists in view of the present state of the liquor market, particularly as regards fictitious brandies and wines?

Accepted by Henry F. Fish, of Waterbury, Conn.

37. An essay on the commerce in Quackery, in the United States, and its influence on the practice and progress of pharmacy.

Accepted by Thomas S. Wiegand, of Philadelphia.

38. The leaves of the castor oil plant (*Ricinus communis*,) and their reported property of promoting the secretion of milk.

Accepted by Alexander Cushman, of New York city

39. What is the botanical source and commercial history of the "anacahuito wood" of Mexico, said to be used in Germany for diseases of the lungs?

Referred to Charles Cuspari, of Baltimore, Md.

40. What are the sources of the senega and spigelia of present commerce?

Continued to L. H. Dohme, of Baltimore, Md.

41. Can Elaterium be produced in the United States, and if so, is the indigenous product equal in power to the English drug? (for 1861 and 1862.)

Referred to Prof. Robert P. Thomas, of Philadelphia, Pa.

42. What is the smallest outfit of a retail pharmacist with reference to the preparation of those chemical and pharmaceutical products which are economically made on a small scale?

Accepted by Edward Parrish, of Philadelphia.

44. What are the best arrangements, and precautions to be observed in the preparation of soap for pharmaceutical uses?

Accepted by Charles Shivers, of Philadelphia.

45. What is the active principle of arnica flowers; and what the best process for isolating it?

Continued to Dr. Henry T. Cummings, Portland, Me.

46. The American species of the genus *cantharis* as regards their usefulness

in medicine as vesicants, their existing quantity in view of the supply of commerce, and other information regarding them?

Continued by request, to T. Chapman Hill, of Antioch, Ohio.

47. What is the best form and material for a still for the pharmacist's use of from two to four gallons capacity, appropriate for heating by gas or stove heat, which shall combine economy with efficiency and fitness?

Continued to Dr. E. B. Squibb, of Brooklyn, New York.

48. An inquiry relative to the comparative value of the several arrow-roots of commerce, which are derived from the *Maranta arundinacea*, &c., the query of last year.

Continued to Evan T. Ellis, of Philadelphia

49. European Pharmacy,—what are the chief differences and points of resemblance between it, and our own?

Continued to Robert Battey, M. D., of Rome, Georgia.

50. What are the principal sources of oil of sassafras for the supply of commerce, and what is its mode of manufacture and the quantity produced annually?

Continued to Alphæus P. Sharp, of Baltimore, Md.

The Committee desire to receive authority to add to this list such of the unanswered questions of 1860 and others, as they may deem most likely to receive attention from the gentlemen to whom they may be entrusted.

WILLIAM PROCTER, JR., *Chairman*,
THOMAS S. WIEGAND,
EDWARD R. SQUIBB,
CHARLES A. TUFTS,
FREDERICK L. JOHN,

New York, Sept. 14, 1860.

Committee.

After some informal discussion on the subject of offering prizes for scientific papers, on motion it was laid over to come up with the unfinished business next year.

Query No. 30. On "Patents in their relation to Pharmacy and Medicine," by Edward Parrish, was now read, (it having been mislaid when called for in the proper order,) and was referred to the Executive Committee.

The President announced the following gentlemen as the committee of three called for by the resolution in relation to the sale of Poisons:

Samuel M. Colcord, of Boston.

William Proctor, Jr., of Philadelphia.

William J. M. Gordon, of Cincinnati.

The subject of weights and measures being now called up, the second resolution was read again, the discussion continued, and on a vote being taken it was not adopted, the general expression being against it.

Dr. Squibb offered the following as a substitute for that resolution, viz:

Resolved, That in the judgment of this Association it is expedient and practicable in the official formulas of the Pharmacopœia to abolish the use of measures of capacity, and to substitute for absolute weights and measures the term *parts*, meaning *parts by weight*; and that this Association recommends such a change as the most simple, practicable, and effective one that can be at present made.

After considerable discussion this resolution was adopted. [It is proper to state that the number present when these resolutions were lost and passed

was much smaller than the average attendance at the other sittings, and it is to be regretted that a subject of such general interest should have been left till the last sitting for its decision.—Ed.]

The Business Committee brought forward the following:—"Whereas, this Association recognizes the justice and propriety of the recent movements in some localities, in regard to restricting the Sunday business of pharmacutists to certain definite hours, for very obvious good reasons, therefore

Resolved, That this Association heartily recommends the adoption of definite hours for the transaction of the necessary Sunday business; such hours to be determined by the co-operation of the public, the Medical and the Pharmaceutical interests of the various localities, when these interests may combine to adopt the recommendation.

Which was adopted.

The Business Committee reporting that there was no more business to be brought forward, it was on motion resolved that that committee be continued to bring deferred business before the Association next year.

John M. Maisch offered the following:

Resolved, That the thanks of the Association are due to the President, the first Vice-President and the Secretary, for the efficient performance of their duty.

The minutes were then read and approved, when the Association adjourned to meet in St. Louis on the fourth Wednesday in August, 1861, at 3 o'clock, P. M.

JAMES T. SHINN, Secretary.

Selections.

DIGITALIS IN DELIRIUM TREMENS.—A few weeks ago, we mentioned in our periscopic department, the treatment of delirium tremens by large doses of tincture of digitalis. In the October 13th number of the *Med. Times and Gaz.*, Dr. Ballard corroborates the statements of Mr. Jones as to the efficacy of this treatment, and gives several additional cases. "My own impression," he says, "from what I have seen and heard from Mr. Jones is, that, in tincture of digitalis, we have a true *counter-poison*—an addition to that class of mutual antidotal poisons of which opium and belladonna have been the most recent example. Alcohol is the remedy by which we counteract the depression produced by digitalis; the converse is also true; digitalis is most remarkably an antidote for alcoholism."

The article recently copied from an English journal on the administration of very large doses of the tincture of digitalis in delirium tremens has attracted much attention. The English official tincture is of the same strength as that of the U. S. Pharmacopœia. A practitioner of this city has informed us that he has frequently prescribed the tincture in drachm doses during acute inflammations, but the use of the article in half-ounce doses in conditions in which the arterial sedative effect is not apparently indicated seems ex-

tremely hazardous. Yet it is claimed that the effects of digitalis in inflammatory affections and in delirium tremens are exactly contrary. In inflammatory disease it subdues and regulates the pulse, whilst in delirium the pulse by it is increased in force and fullness.

EXPULSIVE GINGIVITIS.—The Paris correspondent of the *Lancet*, says:—In a recent communication to the Academy of Medicine, M. Marchal de Calvi dwelt upon a not uncommon disease of the gums and alveola. This disease, hitherto unnamed, he proposes to call “expulsive gingivitis,” and as a suggestion of treatment, based upon a series of successful cases, is appended to the essay, I deem it worth mentioning. The affection consists in an inflammation of the gum and of the tooth-socket or its lining, mostly commencing by an abscess, with a subsequent slow inflammatory process. The tooth begins to emerge from its position in the jaw, deviating from the natural direction; the gum recedes, and if the malady be unchecked, the former is completely ejected from its legitimate lodging. The disease is mentioned by English authors, but seems to be, if not unknown, at all events *unnamed* in France, and constitutes the torment and bugbear of many a coquettish middle-aged lady. M. Marchal de Calvi enumerates as the causes of this unsightly affection,—first, hereditary predisposition; next, exposure to damp and cold, the neglect of cleanliness, and presence of tartar round the gum, dyspepsia or gastric irritation; and lastly, pregnancy and lactation. The remedy found most successful in cutting short the disease in its early stage is, a *watery* solution of iodine to be brushed twice daily over the gum: the solution at first to be used weak, and subsequently stronger, until a concentrated form is tolerated.

VERATRUM VIRIDE IN PUERPERAL MANIA.—A highly interesting instance of the sedative action of *veratrum viride* was given by Dr. John L. Atlee, Jr., at a session of the Lancaster (Pa.) Medical Society. In order to diminish the nervous excitement, and control the general circulation in a patient showing all the symptoms of puerperal mania, Dr. A. ordered the saturated tincture of *veratrum viride*, in doses of five drops every three hours, which, after three doses, produced subsidence of most of the symptoms, which disappeared completely when the medicine had been continued for four days, at intervals of four and lastly of six hours, followed by perfect re-convalescence.

QUININE AND ABORTION.—Edward Warren, M. D., Editor of *The Medical Journal of North Carolina*, in the May issue of that journal, commenting upon an article from the *Med. Monthly*, says: “We have found nothing more likely to produce abortion in pregnancy than the administration of large doses of quinine.”

IRON IN ERYSIPELAS.—D. Ch. H. Hughes, of Warrenton, Mo., (St. Louis *Med. and Surg. Journal*, Sept. 1860,) relates some remarkably violent cases of erysipelas, which were cured principally by the internal administration of the muriated tincture of iron in doses as large as a drachm.

THE RETIREMENT OF M. RICORD.—M. Ricord has retired from his post as surgeon of the Hospital du Midi. The hospital regulation which requires the retirement of medical officers at the age of sixty, would soon have completed his term of service, but he has chosen a more dignified leave by resignation.

Ricord was born in Baltimore on the 10th of December, 1800, and has held his position in the hospital for nearly thirty years. His opportunities have been unequalled, and his great reputation has been the result of immense labor and observation on the speciality which is so much indebted to him for its development.

Ricord's place, it is said, is to be filled by one whose name is not unknown to syphilography—M. Alphonse Guérin.—*Medical and Surgical Reporter*.

SINGULAR CASE OF LOSS OF HAIR.—In the *Boston Medical and Surgical Journal* for June 14, Dr. H. O. Jewett reports the case of a boy "that when an infant had hair like other children, but when four or five years of age, and while in perfect health, it began to fall off, and in a few weeks left him completely hairless." Eyebrows, eyelashes, as well as every hair upon the head, came out; and five years later, at the time of the report, there was not the least evidence of any natural effort at reproduction.

VERATRUM VIRIDE IN PNEUMONIA.—In the *Nashville Journal of Medicine and Surgery* for June, Dr. A. A. Davidson has an article upon the use of veratrum viride in pneumonia. This is not a new treatment, but his experience and confidence are such as to justify their repetition. He says, "I have followed no other particular treatment for the last two years in pneumonia and pleurisy than the medicine in question, and I am happy to say I have never seen a case terminate unfavorably under the treatment." In conclusion, he says, "I look upon the veratrum as being worth all the other treatments combined for pleurisy, pneumonia and all other diseases of an inflammatory nature, when carefully and judiciously administered. I speak this candidly, because it is my own experience that prompts me to do so."

ASCARIDES.—The origin of entozoa, and among them of the ascaris vermicularis, is still doubtful; but it may fairly be supposed that the entozoa found in the alimentary canal are introduced from without. During the last eleven years I have been in the habit of using diluted phosphoric acid, with infusion of quassia, in cases of ascarides, at the Bath United Hospital, and in private practice, and have as yet no reason to mistrust its efficacy.

R. WILBRAHAM FALCONER, M. D.

SEDATIVE PILLS.—The following is the formula of the most efficacious of pills in the sleeplessness of hypochondriacs and hysterical persons, and indeed of all persons suffering from nervous affections:—Assafetida one dram, sulphate of morphia three grains, into thirty pills, one or two at bed-time. From two to four of these pills daily are of great use in relieving the dry cough to which nervous women with irregular menstruation are liable.—*Moniteur*, 97.

NEURALGIA.—In the *Chicago Medical Examiner* for June, Dr. L. D. Robinson has an article upon neuralgia, in which his views of its pathology are given, and also his plan of treatment. We subjoin only the treatment. In a case reported, the treatment advised, which, he says, was that usually advised by him, was the following:

"R.—Chinoidine,	-	-	-	24 grs.
Pulv. Capsicum,	-	-	-	5 grs.
Strychnia,	-	-	-	1 gr.

M.—flat. pil. No. 10. Dose—a pill before each meal.

After using the above sufficiently long, to break down the paroxysm, and give the patient relief, we prescribe the following:

Quevenne's iron,	-	-	-	60 grs.
Quinine,	-	-	-	60 grs.
Ext. Hyosciami,	-	-	-	40 grs.
Pulvis Capsici,	-	-	-	20 grs.

Divide into 40 pills. Dose—a pill after each meal, and to be continued until completely relieved of debility."

CANNABIS INDICA AS A HYPNOTIC.—Dr. Frommuller, after a large number of experiments, draws the following resumé of the value of this drug.

Of all anæsthetics ever proposed, Indian hemp is the one which produces a narcotism most closely resembling the natural sleep without causing any extraordinary excitement of the vessels, or any particular suspension of secretions, or without fear of a dangerous reaction, and consecutive paralysis. It acts neither as violently nor as surely as opium. It can be given in all acute inflammatory diseases as well as typhoid affections. It is well adapted as an alternate with opium in case this ceases to act. Its best mode of administration consists in pills of the alcoholic extract and powdered seed. The smallest dose susceptible of producing sleep is eight grains in pills of one grain. This dose, however, must be rapidly augmented. The action on the skin, the kidneys and sexual organs, attributed to Indian hemp is without any practical importance.—*Prager Vierteljahrschrift*, 1860.

EXPEDITIOUS METHOD OF CAUSING CESSATION OF THE LACTEAL SECRETION.—The most simple method, says H. M. Van Holsbeck, which I have followed for the last three or four years, and which I have never known to fail, and have found described nowhere, is the following: Introduce into the tip of a goose feather, prepared as for camphor cigarettes, a quantity of metallic mercury sufficient to fill it exactly, and fill up the ends with sealing wax. The patient suspends this little instrument in front of the sternum. In less than twenty-four hours the lacteal secretion will have entirely ceased, and two days after the breasts will have assumed their normal state.—*L'Absille Médicale*.

A SIMPLE SUBSTITUTE FOR LALLEMAND'S INSTRUMENT.—Dr. Porcher, of Charleston, introduces an ordinary catheter as far as the mouths of the seminal vesicles, and then pours into the extremity of the instrument a solution of the nitrate of silver.

A NEW SUGGESTION FOR THE RELIEF OF STRANGULATED HERNIA is made by Dr. S. Oliver in the *Lancet*. The abdominal muscles are to be relaxed by elevating the patient's chest and thighs while he lies on his back. The taxis is now resorted to while the assistant sinks his hands into the hypogastric region of the abdomen, and moves them upward towards the ribs.

POISON OAK.—D. C. A. Canfield, in a letter to the *Pacific Sentinel*, states that a certain cure for the poisoning of the *Rhus toxicodendron* is a decoction of the leaves of the *Grindelia hirsuta* and *robusta*.

DETECTION OF THE ADULTERATION OF CITRIC WITH TARTARIC ACID.—The similitude of the physical characters of these acids, when the crystals are bruised, permits of this adulteration in commerce. It is easily detected by pouring over a horizontal glass plate a thin layer of a slightly saturated solution of caustic potass, and then projecting on this a portion of the mixture of doubtful crystals. In a few seconds the tartaric acid crystals whiten, become opaque, being covered with microscopical crystals of bitartrate of potassa. The citric acid crystals continue diaphanous, being partly dissolved in the alkaline solution. The relative quantities of the two acids may thus be easily appreciated. The same means may be applied to a powder formed by exactly mixing the two acids. The object-glass of a microscope being wetted with the solution is then powdered with some of the suspected substance. A crowd of minute acicular crystals is produced from the tartaric acid, while the diaphanous citric acid disappears in the solution.—*London Pharm. Journ. from Bulletin de Therap.*

Pharmacy.

SOAP OF IODIDE OF POTASSIUM WITH GLYCERINE.

By Therault.

Glycerine at 28° or 30°, 1000 grammes.

Animal soap in powder, 50 “

Dry iodide of potassium in powder, 130 “

Dissolve both in water. Mix all in a marble mortar and stir well for fifteen minutes, and flavor with oil of bitter almonds, 2 grammes.—*Bulletin Gén. de Thérapéutique.*

STEARATE OF QUINIA AND SODA WITH GLYCERINE.

By Therault.

Stearate of quinia, 4 grammes.

Animal soap, 4 “

Glycerine, 32 “

Melt in a water bath. Mix in a marble mortar, stir well some minutes, and flavor with oil of bitter almond, q. s.—*Idem.*

iodo TANNATE OF LEAD.

Iodine, 2 parts.

Tannin, 14 "

Dissolve each, and mix; then add to a solution of acetate of lead. Collect the precipitate, wash and dry it.—*Idem*.

SEDATIVE PILLS.

Assafoetida, 4 grammes.

Sulphate of morphia, 20 centigrammes.

Make thirty pills. Take one or two before going to bed. These pills are excellent for quieting a dry cough.—*Idem*.

SYRUP OF IODIDE OF MANGANESE.

Crystallized sulphate of manganese, 16 3

Iodide of potassium, 19 "

Sugar and water, each a sufficient quantity.

Dissolve the sulphate of manganese and iodide of potassium each in three fluid ounces of cold water, containing two drachms of syrup, and mix them in a glass stopped bottle, and after the crystals of sulphate of potash cease to precipitate, throw the solution on a filter of fine muslin, and allow it to pass into a pint bottle containing twelve ounces of powdered sugar. When the solution has ceased to pass, wash and filter with a little water, and then add sufficient of that fluid to make the whole measure one pint. Finally agitate the bottle until the sugar is all dissolved. This preparation contains about one drachm of solid iodide of manganese to each fluid ounce, which is the strength of the officinal solution of iodide of iron.

The dose varies from ten drops to half a fluid drachm.

PILLS OF IODIDE OF MANGANESE.

M. Hannon recommends these to be made by mixing equal quantities of iodide of potassium and dried sulphate of manganese, and forming a mass with honey, which should be divided into pills, each containing four grains. They should be kept in a well stopped bottle. The dose is one pill daily, gradually increased every three days to six pills. They are then omitted eight days, after which their use is resumed.

REMEDY FOR ASTHMA.

By Dr. J. H. Simms, of Wilmington, Delaware.

R Potassii Iodid, 3 ij.

Ext. Lobelia fluid, 3 j.

Aquæ font, 3 xv.

M. Fiat Solut. Dose—a tablespoonful to a wineglassful three times a day.

OILED SILK.

Is best prepared by coating silk with boiled linseed oil, and drying it in a warm room. Two or three successive coats should be applied, each being perfectly dry before the next is put on.

PHOSPHATE OF MANGANESE.

Sulphate of manganese, 4 ounces.

Phosphate of soda, 5 “

Water, a sufficient quantity.

Dissolve the sulphate and phosphate severally in two pints of water, mix the solutions, wash the precipitated phosphate, till the sulphate of soda is removed, press it between the folds of bibulous paper, and dry it a moderate temperature.

FORMULÆ FOR THE PREPARATION OF THE PRINCIPAL COLLYRIUMS USED IN OPHTHALMIA—EMPLOYING GLYCERINE INSTEAD OF WATER.

By Dr. Foucher.

Pure Glycerine,	80	grammes.
Borax,	2 to 4	“
Pure Glycerine,	30	“
Sulphate zinc,	1 to 3	“
Pure Glycerine,	30	“
Sulphate Copper,	1 to 4	“
Pure Glycerine,	30	“
Tinct. Iodide,	4 to 8	“
Pure Glycerine,	30	“
Per Chlorid, Iron,	1 to 4	“
Pure Glycerine,	30	“
Tannin,	1 to 4	“
Pure Glycerine,	30	“
Calomel,	2 to 4	“
Pure Glycerine,	30	“
Laudanum,	2 to 4	“

[*Bulletin Gén. de Thérapéutique.*]

ROBINEAUD'S ELIXIR OF CITRO-LACTATE OF IRON.

Mr. Robineaud, of Bordeaux, has published the following formulæ for this elixir, which originated with him:

Dissolve in a porcelain dish two parts of lactate of iron and 70 parts of distilled water, by the aid of a moderate heat, then add two parts of citrate of iron, which will readily dissolve, add the liquid to 50 parts of alcohol (80°),

and 90 of simple syrup contained in a flask, flavor with two parts of the tincture of lemon-peel, with two of tincture of canella, and six drops of the tincture of cloves, and finally color with caramel.—*Journal de Pharmacie de Bordeaux.*

PILLS OF IODIDE OF IRON AND QUINIA.

By M. Augieras.

Iodine, 5 grammes.
 Iron reduced by Hydrogen, 2 “
 Mix the iodide and iron in a mortar; when well mixed add
 Sulphate Quinia, 3 gram. 40 cent.
 Triturate until the combination has passed to a pulverent state, and make
 200 pills. In some cases combine
 Extract Gentian, 10 grammes.
 Digitalis in Powder, 10 “ [*Idem.*]

TREATMENT OF WHOOPING COUGH.

Distilled water, 125 grammes.
 Water of orange flowers, 8 “
 Syrup of peony, 80 “
 Syrup of belladonna, 10 “
 Ammonia, 6 drops.
 A spoonful every hour during four or five days, and afterwards every two hours.—*Répertoire de Pharmacie.*

Editorial.

OUR JOURNAL.—With this number we close the Second Volume of the *Journal of Materia Medica*. The support it has received from the profession the past year has been greater than the year previous, and the commendations from the most eminent men in the profession, as well as from Foreign and American journals, are ample assurance that the *Journal* as conducted is capable of doing good,—has really done good. A wide field is yet unexplored, and we shall continue the same line of investigation of indigenous plants.

Dr. Lee will contribute monthly to its pages until the list of indigenous remedies, and the plan indicated by him at the commencement, is completed. In connection with these essays we shall continue the analysis of such as have not been analyzed; explaining the relations which preparations of each should hold to the crude material; making it an important feature in determining their quality and uniformity of active principle. The time and labor involved in these experiments are much more than is usually esti-

mated, and few will be found willing to devote it to this branch of Science. The advantages of correct analysis, when properly considered, none can question. Without it we know nothing more of the natural combinations of plants than our daily observations concerning their remedial effects in certain cases teach. In this way they have received a general classification, and should be subdivided or grouped according to their respective elements and the indications they are capable of fulfilling. No two possess the same identical properties, but each has qualities peculiar to itself. No two species of the same genus have precisely similar properties. Each has a range of application peculiar to itself, depending upon principles variously associated, and the influence each exerts in the combination.

It is only by a full understanding of the elements of a plant that practitioners are able to adapt the remedy to the many different pathological conditions, and form such combinations as their judgment may suggest.

Connected closely with this subject is that of the cultivation of medicinal plants, and the development of the active principles, concerning which we have made some highly interesting experiments, to be given the public through the pages of the *Journal* as they are completed.

For terms, see Prospectus. Bound Volumes for 1859 and 1860 will be forwarded for \$1.00 each, postage paid.

THE BALTIMORE JOURNAL OF MEDICINE is the title of a new journal to be published bi-monthly, and to contain 100 pages at least. Dr. Edward Warren, late Editor of the *North Carolina Medical Journal*, and now Prof. of *Materia Medica* and Therapeutics in the University of Maryland, will edit it. He has a high reputation as a journalist, which is a sufficient guarantee of its success, and commends it to the confidence and support of the medical profession of that State.

THE UNIVERSITY OF MARYLAND commenced its session on the 15th of last month, with an Introductory Lecture by the Professor of *Materia Medica* and Therapeutics, Dr. Edward Warren.

The Class is one of the largest that ever assembled in Baltimore, and everything promises a most harmonious and successful session. We are pleased to state that North Carolina is well represented, and that these students are from most of the southern States. To our personal friends everywhere, who have interested themselves in our behalf, we return our most cordial thanks, assuring them that their kindness is fully appreciated; and that, should an opportunity ever offer, it shall be returned with interest.—*North Carolina Medical Journal*.

NEW MEDICAL JOURNAL.—We have received the prospectus of a new monthly journal of medicine, to be published under the auspices of the Berkshire Medical Society, entitled the *Berkshire Medical Journal*. It is to be edited by Drs. Wm. Henry Thayer and R. Cresson Stiles, Professors in the Berkshire Medical College, both of whom are well fitted for the post with which they

have been entrusted. It will be the object of the Journal, says the Prospectus, "to advance, as far as practicable, the interests of rational medicine, extending the conquests of positive science over the domain of tradition." The first number is to be issued on the first of January, 1861.

DR. GIBBS' SECOND CIRCULAR.—The undersigned would respectfully tender his thanks to the Editors of those medical journals who have so kindly noticed his proposed enterprise, in regard to the publication of a *Year-Book of American Contributions to Medical Science and Literature*. He is confident that such a work is needed by the profession, and is demanded by the honor of American medicine. In America, there are no *Abstracts* or *Retrospects* corresponding with those of *Ranking* or *Braithwaite*. These, though valuable productions, are in no manner representatives of American medicine. The gleanings in these are almost entirely confined to journal literature, whereas it is proposed to give in the *Year-Book* a synopsis of all medical matters of importance found in journals, Society transactions, monographs, books, &c., pertaining to medicine having an American origin, and published during the year immediately preceding. As stated in a former circular, to fulfill his design, the undersigned wishes all medical journals, Society transactions, and medical books, of recent issue, sent to his address. A few are yet wanting, to which omission he asks the attention of authors and publishers. What he wishes more particularly to say at present is, that he cannot publish without a greatly increased subscription list. To American physicians he appeals in behalf of American medicine, and trusts they will promptly respond to his former circular. Otherwise his enterprise must fail for want of encouragement. Subscribers' names, books, &c., to be directed to

O. C. GIBBS, M. D., Frewsburg, Chautauquay Co., N. Y.

THE PHYSICIAN'S POCKET MEMORANDUM FOR 1861. By O. H. CLEVELAND, M. D. Second Revised Edition. Cincinnati, Ohio.

We have received the above useful article, which every physician who has used them fully appreciates. We give some of its principal points of usefulness:

1. It contains a full Classification of Medicines used in practice—with their Action on the system—their mode of Preparation—and the Doses of each form of preparation.
2. It contains a full list of Abbreviations used in writing prescriptions, together with the words or phrases abbreviated, and an English translation. This enables even those who are not intimately acquainted with the languages to read the prescriptions in any book with readiness.
3. Full directions are given for the immediate management of all Accidents and Emergencies, with the directions arranged in alphabetical order, for convenience of reference. This part of the book has been found to be of great utility.
4. The third division contains full directions for the treatment of cases of Poisoning, together with a very full list of Poisons and their Antidotes.
5. Full and definite directions are given in regard to making Post Mortem examinations of all parts of the body.
6. The best modes of Preserving or Embalming bodies for delays in burial, for transportation, or for dissection, are carefully explained.
7. Careful directions, with a plain Rule for the Prescription of Medicines.
8. This division of the book contains a Calendar of the entire year so arranged and ruled as to take the place of the Day-Book of Accounts, and to record the visits to *Sixty* patients a day. No Day-Book is needed where this is used, and much larger space is allowed for this record of Practice than is allowed in any similar work.
9. There are a large number of blank pages, designed to be used as a General Memorandum, and in such a way, and for such purposes as the desires of each individual may indicate.

The Memorandum is made of the best paper, and substantially bound in flexible binding, with *back*, *pocket*, place for *pencil*, and the usual arrangements of a Pocket-Book.

The amount of printed matter is fully equal to that in ordinary small volumes, being nearly an hundred pages in fine type; and yet with all the superiorities of value and expense over similar works, it is sold for only *one dollar* a copy.

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